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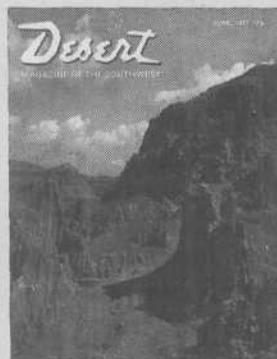


Volume 40, Number 6

JUNE 1977

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A Peek in the Publisher's Poke

WHEN TROPICAL storm Katrina swept through Southern California last September, the Southern Pacific Railroad was one of the hardest hit in terms of financial loss. Bill Jennings, in his feature article, "The Impossible Railroad," page 24, deals with the history of the railroad and the devastation that Katrina caused. However, I would like to add a word of caution.

Although the Southern Pacific has filed formal abandonment petitions with federal and state regulatory bodies, the San Diego & Arizona Eastern Railway is still a going concern, and previous prohibitions regarding Trespass, particularly in Carrizo Gorge, still apply. The right-of-way is posted against casual visitation and removal of ties, spikes, rails and other souvenir items can lead to court. The abandonment process is expected to take another several months because several shippers, governmental agencies and even the Republic of Mexico have protested the abandonment request. Southern Pacific estimated the line lost more than \$1.1 million annually in recent years and traffic was still declining when the September 1976 storms occurred.

A tentative plan to make a portion of the desert trackage a part of Anza-Borrego Desert State Park has not been approved by the State Park and Recreation Commission, pending the abandonment procedure, so that proposal is as nebulous as other aspects of the "Impossible Railroad's" future.

Perhaps the only good derived from the Katrina storm was the germination of millions of beautiful wildflower seeds which have in turn provided us with carpets of beauty the entire winter.

William Knapp

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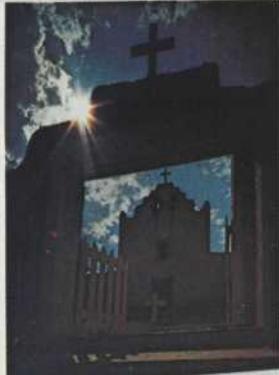
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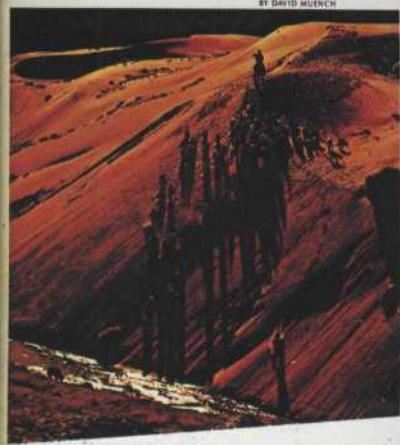


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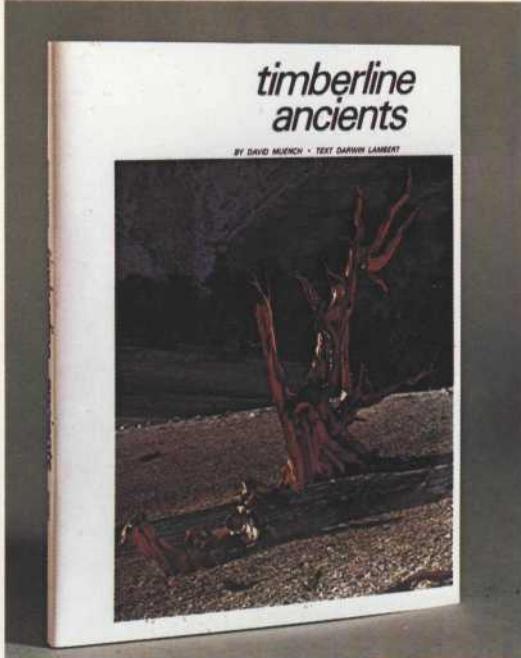
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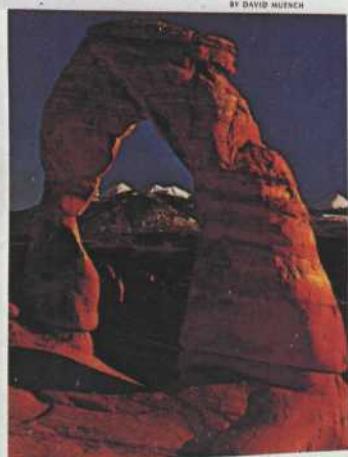
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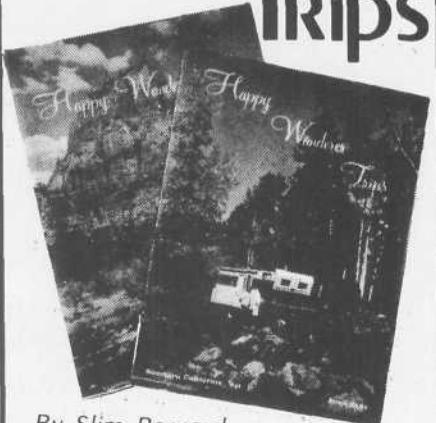
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By David W. Toll

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gions—mining country, Big Bonanza country, cattle country and Mormon country. Each region has its own particular identity and history Toll has captured both the serious and humorous sidelights of history, scandalous moments and great moments—all in a style of writing that will delight the reader.

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David Toll knows his subject well. He is publisher of the *Gold Hill News*, one of the oldest newspapers on the Comstock Lode. His great-grandfather was a leading mining superintendent on the Comstock during the bonanza years and the long decline, and his great-great uncle was John P. Jones, U.S. senator from Nevada for 30 consecutive years. Toll now resides in the tumbledown remnants of the Jones mansion in Gold Hill.

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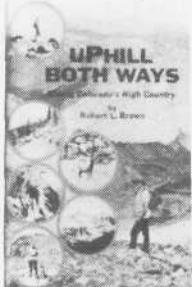
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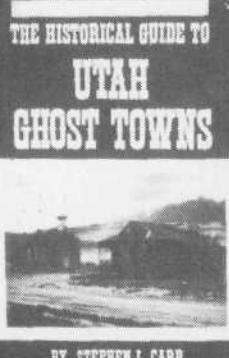
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A NEW LOOK AT OL



by MARY FRANCES
STRONG

photos by Jerry Strong

Left: Several tunnels exist at the mine. From some of their ceilings, secondary minerals such as chalcanthite have crystallized from percolating ground water.
Below: The large open cut on the mountainside constitutes the primary mine workings. This is the main collecting locale but good mineral specimens and cutting material have been found around all the workings.

HERE ARE very few mines on California's Great Mojave Desert that have been a source of good mineral specimens or quality cutting material. The Old Copper World, on Clark Mountain in eastern San Bernardino County, has been a notable exception. For over three decades it has lured the rock collector and some fine mineral specimens, as well as excellent cutting material, have been their reward.

Gem material at the Copper World is not plentiful, but then it is a rare occasion when such conditions exist. However, there has been considerable exploration work and open-cut mining has left half of a mountainside exposed. Dumps are numerous and only their surfaces have been touched by collectors. All the foregoing are necessary factors for good rock collecting. To be sure, it takes digging and some hard-rock mining. That is the name-of-the-game when you are after top-quality material.

Since my initial visit to the Copper World in 1952, I have stopped by regularly over the years to do a little collecting. My luck has usually been good. After an absence of five years, Jerry and I revisited the old mine last winter. Though many individuals and rockhound clubs have regularly made field trips to the site, we found few changes.

The last section of road is still rough and the collecting good. Matter of fact, there is little change since 1952, except the two remaining frame buildings have been torn down and the hike up the open cut seems steeper. The latter is probably due to our being 25 years older!

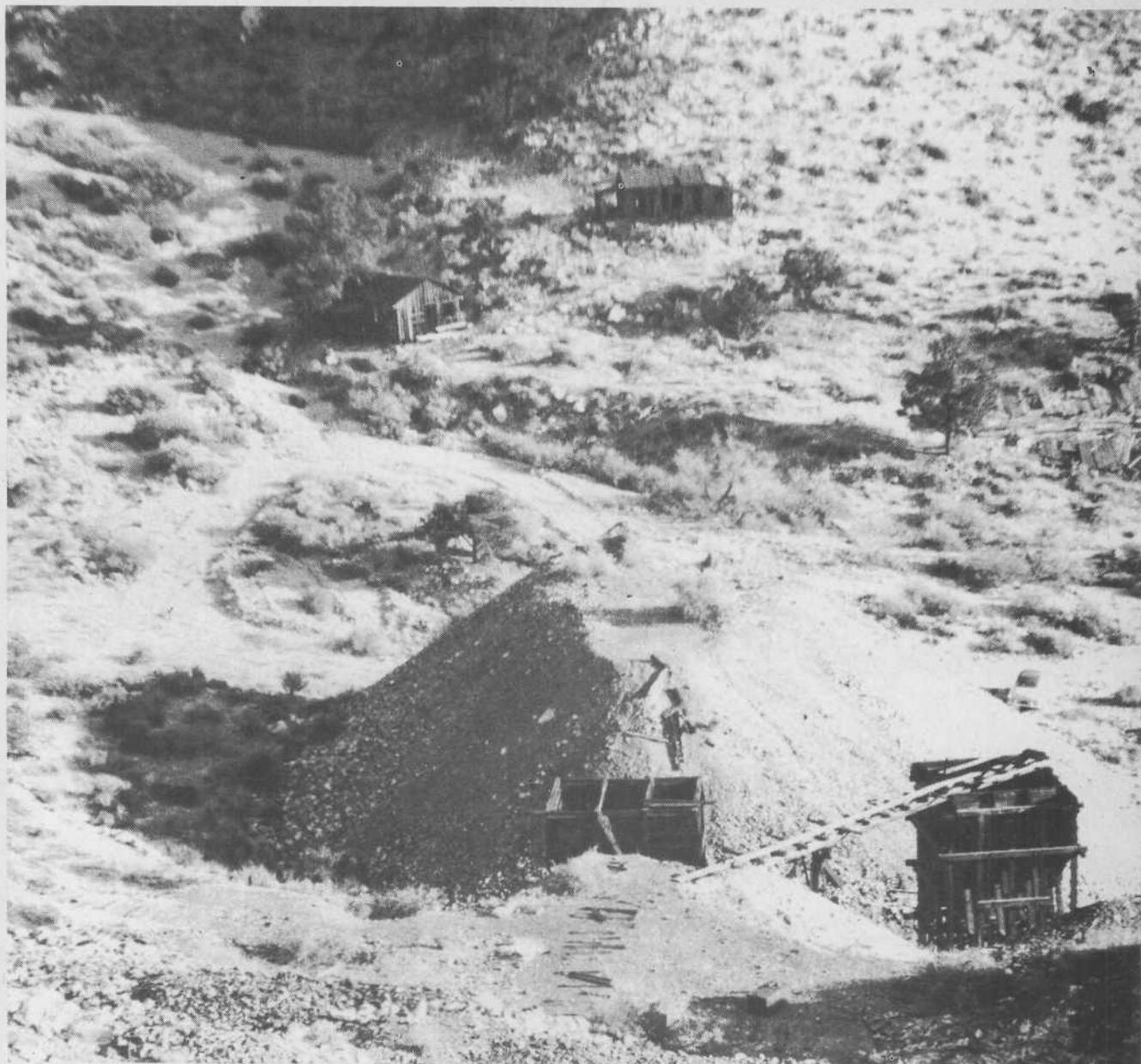
Cutting material to look for includes malachite in veins of varying sizes. One 10-inch vein is exposed near the top of the cut. Some of it is of good color and quality — suitable for cabochons. Stringers of malachite occur in a warm-brown basalt (halfway up the cut on the left) which gives the effect of spiderweb turquoise when cut and polished.

Chrysocolla has also been found in veins up to about one inch wide. It is rare but of top-gem quality — translucent and a gorgeous blue color. We were lucky enough to find a nice chunk, seven



D COPPER WORLD

Looking east from the Copper World Mine, a 1952 photo indicates the sites of two comfortable dwellings. Today, only the rubble of their foundations and scraps of wood mark their location.



inches long, three inches wide and one inch thick, in one of the dumps!

Mineral specimens include nice malachite and azurite crystals; beautiful chalcanthite on dolomite; massive bornite and chalcopyrite. We have been told a small amount of good linarite has also been collected. No doubt there have been other mineral finds unknown to us.

To successfully collect at the Copper World, you must take the time to become acquainted with the entire area. Systematically hike over the open cut. Watch for the south shoulder where the pseudo "spiderweb malachite" out-

crops. Examine the numerous small dumps and ore piles. The wide malachite vein near the top has been worked by many but material is still available. Hike over the ridge above the cut — there is more on the other side.

A thorough reconnaissance will give you a good idea of where to dig. Too many collectors drive up to a locale, jump out of their cars and start working the first dump they see. If it happens to be a pile of gangue, they will not find much of interest. A day for getting acquainted with a locale is well spent in terms of the rewards later reaped. A

shovel, pick, sledge, crowbar and chisels will be needed, if both dump and veins are to be worked.

To reach the Copper World Mine, take the Cima off-ramp from Interstate 15 (see map). There is a choice of routes from this point. Our preference is the powerline road, seven-tenths of a mile north. It is the most direct route and o.k. for trailers and motorhomes.

Camping is a bit of a problem as the last mile and a half to the mine is not advisable for trailers or motorhomes. A small open area east of the large dump will handle a few vehicles. South of the

junction of the powerline and mine roads, there are a few open areas which will accommodate trailers. Gasoline, candy and snacks are available at "Stuckeys" just south of Cima off-ramp.

The Copper World Mine (Ivanpah, Ivanpah Copper) dates back to 1899 and was a producer of copper, gold and silver. There are two main workings, The Copper World and Dewey. The copper minerals here are associated with bodies of silicate minerals formed as alterations of Goodsprings dolomite near sills of quartz-monzonite.

Ore was mined from veinlets and irregular bodies of malachite and azurite. It is reported to have averaged 2 per cent copper. Mining was fairly extensive with over 2,000 feet of drifts, winzes and crosscuts near the dolomite, quartz-monzonite contact. The Dewey workings, 1,500 feet south, are along the same contact.

At first, the ore was teamed down a five-mile grade to a smelter at Rosalie

(later called Valley Wells). Further shipment required a long, hard, steep haul of 35 miles to the terminus of the California Eastern Railroad at Manvel in the New York Mountains. When the mine owners learned a new smelter was operating in Needles, they prevailed on the railroad to build an extension into Ivanpah Valley.

The little California Eastern Railroad (originally Nevada Southern Railroad running from Manvel to a junction with the Santa Fe at Goffs) was suffering with severe financial problems. Hoped-for rich ores and widely publicized "caves and three-foot veins of gold" in the Vanderbilt Mines had materialized only on the front pages of *The Vanderbilt Shaft*.

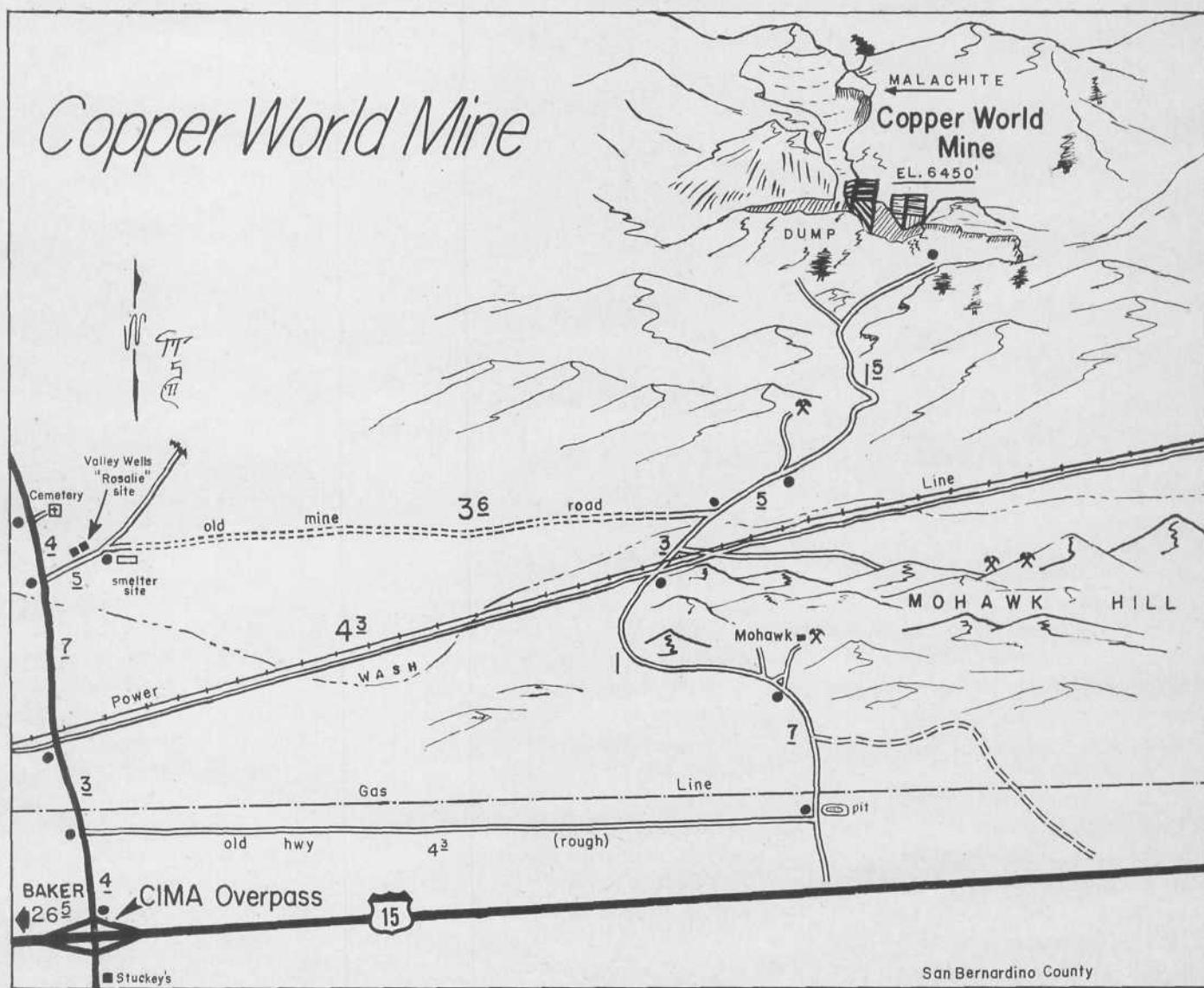
Prospects of regular ore shipments from the Copper World appeared to be a possible salvation for the little railroad. Even the Santa Fe was impressed and loaned California Eastern the money to build the extension in return for a 49 percent stock interest. Construction

began in April 1901 and Mojave Indians were hired to do all of the grading by hand. The extension was completed a year later to Ivanpah Station in Ivanpah Valley—15 miles short of the original plan for a terminal at Old Ivanpah.

A few months later, the Santa Fe purchased the California Eastern. The little railroad's future seemed assured as regular mining activity continued at the Copper World and in the Goodsprings and Ivanpah Districts.

However, progress does not stand still. In 1905, the Union Pacific's Salt Lake Line — running north through Ivanpah Valley to Las Vegas and on into Utah — was completed. Its tracks cut across the California Eastern a short distance south of Ivanpah Station. The little railroad that had served the area so well was doomed. It gallantly struggled along and finally ceased operations in 1923.

After a closure of several years, the Copper World Mine was reactivated in 1917. A considerable tonnage of what





A cluster of cottonwood trees mark the site of Valley Wells. Smelter foundations remain intact adjacent to a tremendous bench of slag. Note the production-size crucible, right foreground.

was thought to be high-grade ore was shipped to the smelter at Garfield, Utah. However, it proved too low-grade to be smelted at a profit. Several thousand tons of tailings were treated in 1944. In recent years the mine has been idle.

Enroute to the Copper World, a narrow ridge will be noted, south of the power line. It is riddled with tunnels, drifts, raises, stopes and winzes — the workings of the Mohawk Lead-Zinc Mine. The ore body consists of lead and zinc carbonates in limestone near a quartz-monzonite contact. We haven't thoroughly investigated the collecting possibilities, but reportedly mineral enthusiasts may find fair specimens of smithsonite, galena, cerrusite and sphalerite.

The Mohawk was first worked for lead and silver during World War I. Its latest production seems to have been in 1951, when 6450 tons of ore were shipped to a reduction plant at Selby, California. This ore averaged three percent zinc, eight to 10 percent lead and seven to eight ounces of silver per ton.

Several frame buildings on the south side of the hill comprised the mine's camp. From the style of a rather large one, we speculated it might have been the miner's dormitory and mess hall. In

the winter of 1976, we found all the buildings gone.

If you enjoy exploring old trails, follow the early ore wagon road down slope to Valley Wells smelter site. Along the way on an earlier trip, we found a beautiful purple Owl Drug Store bottle and an old whiskey bottle. The route is rough and washed out in places but pick-ups and four-wheelers should not encounter any problems.

Tons of slag and cement foundations mark the former mill site. A lone cottonwood tree still stands as a living memorial to busy days of yesteryear. Not much is left to indicate "Rosalie," except for a couple of aging frame houses now used occasionally by stockmen.

Just east of the paved road, a half-mile north of the road to "Rosalie" and the smelter site, lies the Valley Wells cemetery. We counted 24 graves but only three were identified. The Yates marker tells it all. "Boots" passed away in 1923. Twenty-eight years later, his loving wife was laid to rest beside him. The desert often casts a spell on many of those who come to work in this harsh and forbidding land. They found an inner contentment and deep love for the wild, lonely and beautiful desert. A fitting place to "REST IN PEACE." □

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THE BURR TRAIL

by ROGER MITCHELL

THE BURR TRAIL started out as a cattle trail so ranchers in the Grand Gulch area of South Central Utah could graze their cattle on the more fertile summer range of Boulder Mountain. As a result of the uranium boom of the 1950's, prospectors opened the way for jeep travel. Slowly through the years the trail has gradually evolved into a good secondary road of graded dirt. It has become an interesting and scenic, yet little-known, back road in the heart of Utah's great vacationland. Curiously, many oil company road maps do not even show the route, yet it is the most direct route linking two of our more scenic National Parks — Bryce Canyon and Capitol Reef. It is also the shortest way into the Bullfrog Basin Marina area of Lake Powell from anywhere in Southwest Utah.

The western end of the Burr Trail starts in the small ranching community of Boulder at the base of the Aquarius Plateau. Utah's State Route 12, a paved highway, goes through Bryce Canyon National Park and presently ends in Boulder. Eventually, however, it will cross the Aquarius Plateau to connect with State Route 24 near Torrey.

Nobody should go through Boulder without stopping at Anasazi Indian Village State Historic Monument. Here is the site of an 800-year-old Indian Village which has been partially excavated. There is a small but excellent museum which depicts the prehistoric village as it was found, and as it must have been. Park Ranger Larry Davis is on hand to explain the archeology.

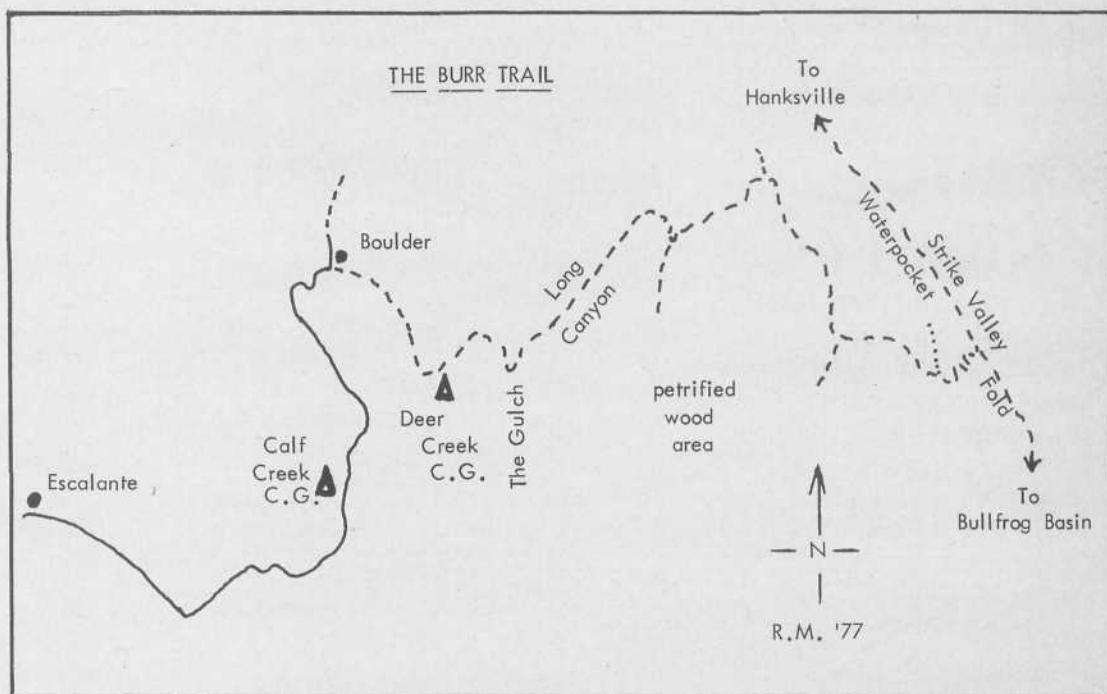
At the main intersection in Boulder there is a combination store and gas station. The owner will gladly give you directions as to how to find the Burr Trail. He will point to the road leading past his store saying "there she is, just follow her east." A word of caution, however, there are no services of any kind on this road for about 75 miles. When you leave Boulder be sure you have ample gasoline, water and supplies.

Leaving Boulder the road takes you through an open forest of scattered juniper, pinyon and ponderosa pine. Cottonwoods line the small stream. About six miles out of Boulder is the Bureau of Land Management's Deer Creek Camp-

Anasazi
granary near
"The Gulch."



Deer Creek,
BLM recreation
area.



ground. There are improved campsites suitable for trailers and tent campers alike. This area is very nice at any time of the year but particularly so in the fall when the golden leaves of the cottonwoods are complemented by the reddish-brown Navajo sandstone in the canyon walls.

The road crosses a low ridge and soon starts to descend into another canyon. At

a point four miles from Deer Creek Campground the road makes a sharp hairpin turn just before reaching the canyon bottom. If you leave your car here and walk up the side canyon to the right (keep to the left fork of this side canyon), a faint foot trail will take you to the ruins of an Anasazi granary tucked under an overhanging layer of sandstone. Granaries are a common feature

left by the prehistoric Indians who once inhabited southern Utah. They would build these rodent-proof structures for the storage of corn, squash, beans, piñon nuts, and possibly other food products. Some of these granaries are 1,000 years old. Please treat them with the respect such artifacts deserve.

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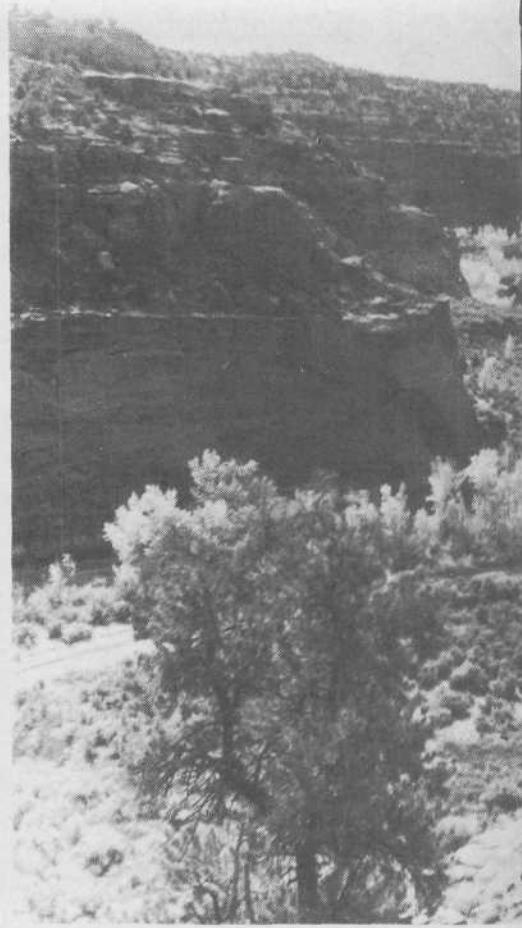
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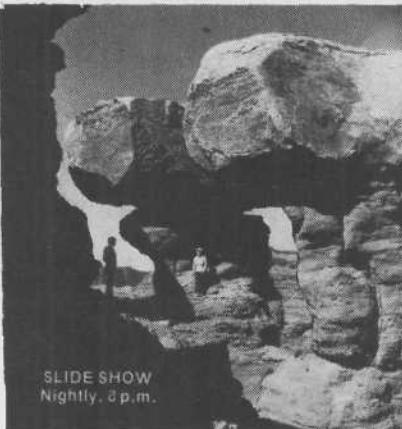
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narrow crack in the canyon wall to the left. This "cave" makes a good picnic spot offering a cool retreat from the summer sun.

The Burr Trail eventually climbs to the head of Long Canyon where, for the first time, you can get a good view eastward into the Waterpocket Fold area of Capitol Reef National Park. Just beyond on the horizon the Henry Mountains rise suddenly out of nowhere. The road winds its way eastward across the gently rolling Moenkopi formation through a pinyon-juniper woodland. Side roads go off to old uranium prospects, and special geologic features such as the "Lampstand" and petrified wood collecting areas. But the BLM has the main road well marked so you need not fear getting lost.

At a point 30 miles east of Boulder the road enters Capitol Reef National Park (no hunting and no rockhounding). Two miles beyond a side road goes left into Upper Muley Twist Canyon where, if you have a four-wheel-drive vehicle, you can wind your way through three miles of colorful canyon complete with natural arches and other interesting geological formations. From the end of the jeep road hikers can continue up the wash to more arches, or they can take a short



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trail eastward to the Strike Valley Overlook for a spectacular view of the Waterpocket Fold. Here the Navajo, Carmel, Entrada, Summerville, Morrison, Dakota and Mancos formations, representing perhaps 125 million years of the Earth's history, are thrust upward and eroded through. They are like the pages of an open book describing Utah in the Jurassic and Cretaceous time periods.

Within another mile the Burr Trail suddenly starts down the steep switchbacks into Strike Valley. As bad as the route may appear from the top, the road is quite safe and in a little more than a mile, it will be all over. From the "T" intersection at the bottom of the grade, good graded roads go to the right to Bullfrog Basin Marina (33 miles) and to the left to Park Headquarters (48 miles) and to Hanksville (64 miles).

Except for brief closures after winter storms, the Burr Trail is open most of the year. It can safely be negotiated by standard passenger cars, although the pulling of trailers down the steep grade into Strike Valley is not recommended. The road is often dusty, sometimes a little muddy, but always rewarding. Don't overlook it just because it is off the beaten tourist routes. It is a journey that will provide wonderful memories. □

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WELTON B. WINN,
General Manager

NEW CAVES AN A

HERE IS nothing quite like it. From the cathedral-like grotto with crystal clear pools reflecting the vaulted columns above, to the delicately sculptured stalagmites that soar toward the dark ceiling, or the stalactites that hang suspended from the cavern roof, the new Arizona-Sonora Desert Museum caverns are unique and breathtaking.

Crowded into the twisting depths, narrow passages and huge galleries of the cave complex are formations in artificial stone that only the most dedicated, cave crawling spelunker would have ever seen previously. For, in the underground wonderland of nature, the most spectacular caves are usually reached only after tedious, sometimes dangerous descents via ropes, or crawling through narrow apertures no bigger than a man's body.

Realizing that most people aren't mentally "wired" for such gymnastics, the men and women at the Stephen House Congdon Memorial Earth Sciences Center decided to create a geology exhibit that would tell the story of the

desert underground, as well as they have with the plants and animals on the surface. To do this, they duplicated in two years a replica of "wet" and "dry" caves that nature took millions of years to create.

The finished product of more than 30 craftsmen, artists, engineers, scientists and mechanics is so real visiting geologists with years of experience in field work have started to clip samples from the artificial stone walls. Others have commented that the museum was so fortunate to have a real cluster of caves so close to everything else in the world-famous natural history attraction!

Nothing in the cave is haphazard, but is the careful development of years of cave exploration by the creative people who have worked on this exciting project. These interpreters of the desert now know almost as much about caves in this part of the world as the majority of dedicated spelunkers who have spent years exploring the scores of natural caves and caverns that dot California, Arizona, Mexico and Baja California.

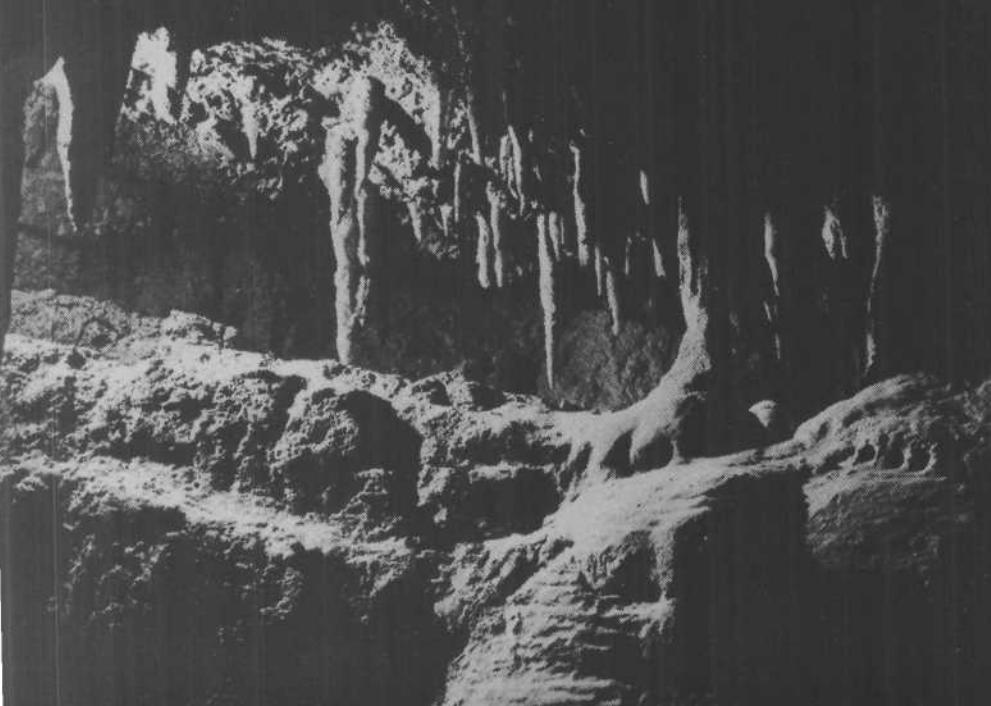
William D. Panczner, curator of earth sciences, and Robert Ottar Dahl, curator of exhibits, assembled a working staff of highly trained people flowing with creative juices to expand upon the original idea of an underground exhibit for earth sciences conceived by Mervin Walden Larson, who wanted to use the idea of an artificial cave as an interpretive form of instruction and entertainment.

The men in charge of the project had to devise an almost new form of technology in order to duplicate some of nature's subterranean masterpieces with modern materials at an economical cost, and still do it within a framework of less than two years.

After artists had sketched out some of the basic visual concepts of the new underground caverns, the people associated with its construction and supervision made hundreds of individual and collective expeditions into "live" caves to see for themselves how Mother Nature formed the awe-inspiring works of art that grace many desert caves. These were no tourist expeditions — they represented a long, usually reflective period of making visual recordings of what was seen. Inside the confines of these wonders of water erosion and dripping stalactites, the creative staff would spend their time with photography and sketches and once back in the museum labs, research into books that would further expand their horizons of understanding.

As each cave was investigated by the researchers, impressions of each person were "boiled down" into scientific features which could be duplicated in the man-made cave which would not only explain the way the earth has been formed over eons of time by earthquakes, erosion, volcanic activity, climate and other forces, but also delight visitors.

In tiny nooks and open rooms, sometimes 20 feet high, visitors will see Nature's artistry at its best, as duplicated by the hands of man. These stalactites and "flow" are typical of the wonders seen underground in the caverns.



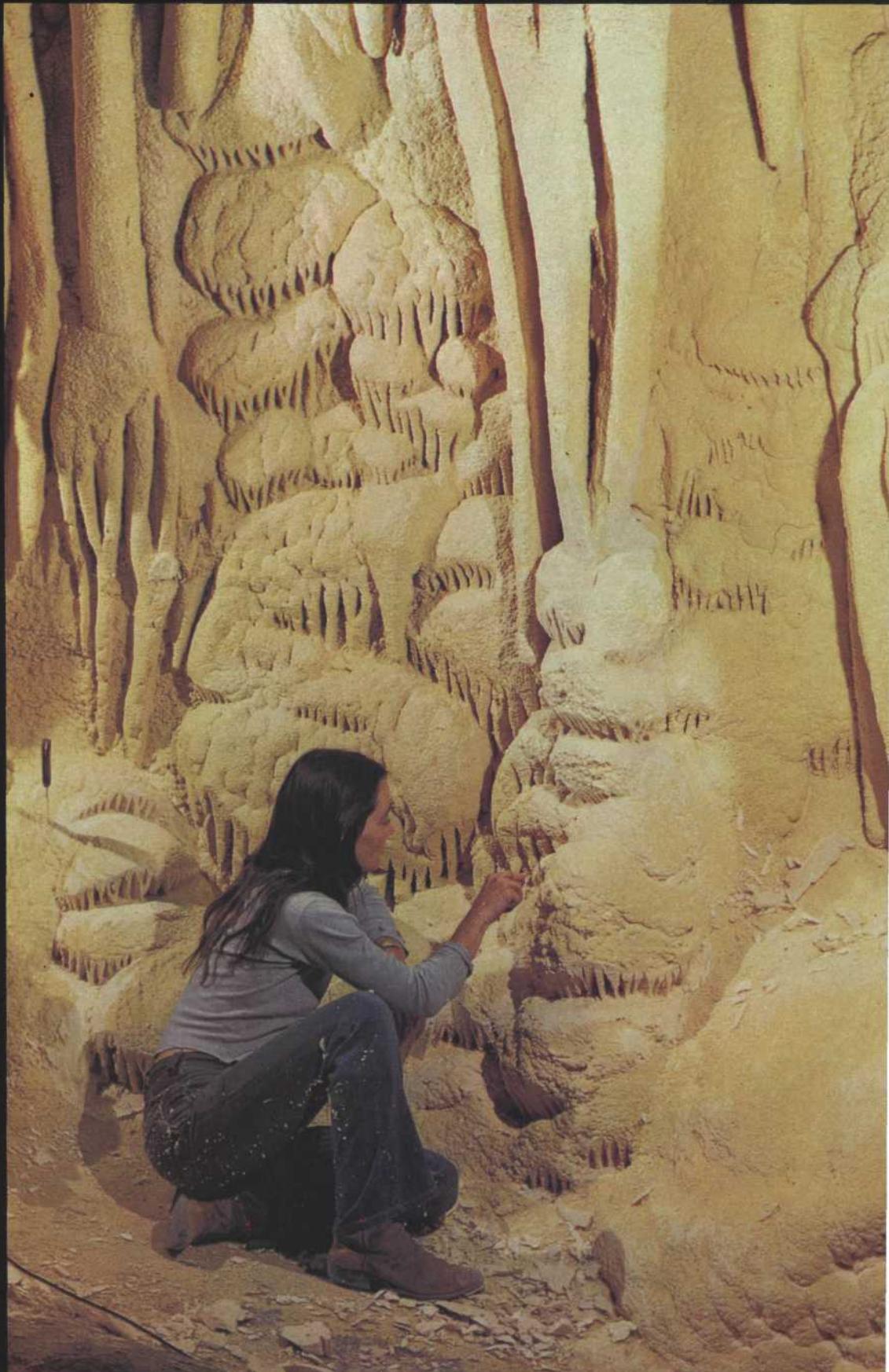
ARTISTIC TRIUMPH

by FRANK TAYLOR

Because of their rare occurrence in nature, and the often all but inaccessible routes one must follow to reach them, many of the brilliant formations seen in the Arizona-Sonora Desert complex would be unknown to the average person—except through photos. Now, even people in wheelchairs will be able to see replicas of stunning beauty closeup, without the rigors of having to be a spelunker.

It no longer takes raw guts and courage to scramble over slippery stone, crawl through fissures in the walls of caves, or dangle by ropes to see the very best examples of natural desert cave formations, for they have all been compressed into two caves in this man-made cluster. Photography even with simple cameras (assisted by a flash cube) will now be an easy task, not one requiring expensive equipment and vast technical knowledge. O

Right: Amy Adshead sculpts formations in the main gallery of the Arizona-Sonora Desert Museum's new underground wonder, a limestone "wet" cave with hundreds of dramatic life-like formations in it made from foam, fiberglass, concrete, plaster and a host of other materials. Photo by Al Morgan.





Left: William D. Panczner, curator of earth sciences, holds a claw skeleton of the Shasta Ground Sloth, one of the fossils that will be seen in its natural setting inside the dry portion of the cave. Below: The entrance to the Arizona-Sonora Desert Museum cavern is through this opening in the "limestone" formations found at the end of a desert wash.

Every aspect of the new caverns are designed to be as natural as possible. The visitor enters through a gently sloping dirt wash and suddenly finds that a small stream beside the path enters into

a limestone outcropping. As tourists proceed into this small cave opening, the water bubbles alongside, collecting in pools with "natural" bridge formations across them.



Almost immediately one is aware of the special world just entered. A cool movement of air tells the senses you are deep underground, and the eerie beauty of carefully lit formations that begin to appear as the trail leads deeper into the earth gives one the feeling of entering an ancient cathedral in Europe. In all directions the visitor sees the handiwork of nature duplicated with vibrant beauty and unique charm.

For children (or adults with a spirit of adventure), there are small crawl passages, exactly as found in "live" caves, plus narrow halls that lead into a maze of sometimes tight places where new wonders open to your view — all cleverly illuminated by hidden lights. The visitor is treated to the tangled fingers of stalactites, stalagmites, helictites and a host of other formations that are so deeply recessed they simply vanish into the deep chambers that abound inside the caverns.

For many, this will be the first venture into the hidden splendors of underground pools, grottos and such things as "shields," "draperies," "bacon" and scores of other little-known cave features. Even the experienced cavern explorer will admit this one is near-perfection in its duplication of nature, and the array of things to view is unsurpassed anywhere in the Sonoran desert region.

The "nuts and bolts" of building such an attraction from scratch is almost as interesting as the finished product. When completed several years from now, the entire three-cave complex will have cost more than \$1 million, and used countless tons of concrete, plaster and such diverse things as pipe cleaners, soda straws and fiberglass.

Yet, none of this is now visible. The myriads of wires, pipes, pumps and other mechanical features are hidden from view, and only the stunning effect of being in an actual cave intrudes on the imagination. As time passes, the many thousands of people who will wander through the exhibit will simply accept it as the real thing, and the hundreds of thousands of man-hours needed to create it will be forgotten, and that is just what the designers want.

In the search for perfection in the duplication of nature, the craftsmen of the museum's staff resorted to many methods, some of them brand new, to achieve their results. Genuine sponges were

The armature of the towering limestone walls of the caverns is supported by extensive steel and wire construction then plastered with concrete that is sculptured into the desired effects by hand.

used to texture surfaces, as was crushed aluminum, and underneath are tons of steel framework, wire mesh and other supports — all built by the cave crew.

Since there was no previous experience in the building of such a large cavern to draw upon, the men and women at the Arizona-Sonora Desert Museum had to devise their own technology. Nature's secrets of construction are not only difficult to unlock, they are also frequently next to impossible to duplicate — unless the artists involved have a high degree of mechanical skills and imagination. They must also be able to adapt some of the most ordinary materials into exotic uses. The results speak for themselves. This is a brilliantly finished series of caves that sometimes leave the senses reeling with their dramatic effects and constantly changing vistas of formations.

As with anything on such a huge scale, this ambitious venture required brute strength as well as a light, artistic touch in its evolution. Soda straws were used as armatures to form some of the delicate crystal-like stalactites, and the helictites were constructed over pipe cleaners so that the twisting shapes peculiar to these formations could be duplicated perfectly.

Those stalactites that visitors are likely to brush against are constructed from durable concrete, while the smaller, more fragile ones are either suspended from the high ceilings out of reach of the curious, or protected behind natural barriers. These are made from sponge rubber, fiberglass and even plaster, then carefully painted with many coats of special paints and colors.

Thousands of gallons of paint have gone into the finished look of the cave's interior, and even the concrete and plaster used was colored with special pigments to make it more life-like and attrac-



trative. Sculpturing in gross textured materials such as plaster and concrete takes patient labor, and is nothing short of very hard work. To keep things on schedule, welders forming support structures frequently worked side-by-side with plastering craftsmen to put up sheer rock walls in record time.

Throughout the new caverns, however, it is nature which is the ultimate artist, for it is nature that is represented in this underground world in all its glory. The dry cave houses an exhibit of minerals in cases, plus an early man

pit site, the fossil remains of a Shasta Ground Sloth, and other details that take the visitor along the path of evolution in geology that has spanned millions of years.

In time to come, hundreds of thousands of people will be grateful to the men and women of the Arizona-Sonora Desert Museum for this special look into the world beneath the desert floor whose wonders are now on permanent display to all who will take the time to enter the cavern recesses and share its quiet magic. It is unique in all the world. □



America Ann Taylor inspects one of the treasures to be exhibited at the "dry" cave, a fossilized bird's nest with eggs, one of only two known to exist in the world. This and minerals will comprise the final end of a cave tour.

NO. 7 IN A SERIES ON CALIFORNIA PALM OASES

Dos Palmas

by DICK BLOOMQUIST

DOS PALMAS — "Two Palms" in the language of Spain — is a tiny, little-known oasis high up in the Santa Rosas. Situated at an elevation of nearly 3,520 feet, it is in fact the second highest palm oasis in the California deserts, outranked only by Single Palm Spring (elevation 3,550 feet) in Joshua Tree National Monument. Curiously, there is another Dos Palmas in the Colorado Desert, and it is among the lowest in elevation, lying a few feet *below* sea level northeast of the Salton Sea. This waterhole, which in the 1860's and 70's served as a stop along the old Bradshaw Trail to La Paz on the Colorado River, now contains scores of Washingtonias, but because it is privately owned I have not included it in this series.

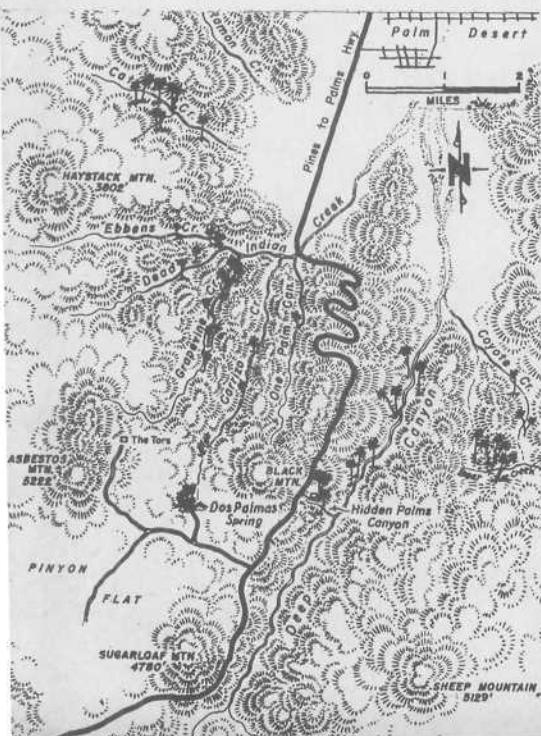
Our Dos Palmas, in the Santa Rosas, stands at the headwaters of Carrizo Creek, a steep canyon which eventually joins Dead Indian Creek near the Palms-to-Pines Highway. It is the Palms-to-Pines road (Route 74) which provides access to Dos Palmas. This remarkable highway, linking the floor of the Coachella Valley with the forested heights of the Santa Rosa and San Jacinto ranges, snakes its way to within one mile of the

Dos Palmas ["Two Palms"], at an elevation of almost 3520 feet, offers a fine blend of desert and mountain vegetation. Pencil sketch by author.

palms. Twelve miles from Palm Desert, the paved Pinyon Crest road forks to the right from Highway 74; follow it for two-thirds of a mile before turning right on a dirt road which leads to a turnaround overlooking the oasis.

No longer true to its name, Dos Palmas today consists of a single Washingtonia. For a while there were three trees, but two have died in recent years, leaving only their lifeless standing trunks behind. When I first visited Dos Palmas in connection with this series of articles, there were two palms, but now the waterhole has taken its place beside Lone Palm and Una Palma in the Borrego Badlands, the other oases along our trail that are made up of only one tree.

The surviving Washingtonia is about 30 feet tall, with a trunk well over two feet in diameter. It does not appear to be in the best of health, however, for its living leaves, which under favorable conditions would be sparkling green, are dappled with sallow patches.



Dos Palmas Spring was trickling at the time of my last visit, the water issuing from a pipe by the upper dead palm. For many years a Forest Service picnic table stood in the bed of Carrizo Creek a few paces below the spring, but the summer flood of 1976 washed it down the canyon. Carrizo can be hiked for seven or eight miles to its junction with Dead Indian Creek, but ropes are needed to descend the dry waterfalls along the way.

To me, the special charm of Dos Palmas lies in its blend of mountain and desert vegetation. Here plants of the lower mountains, pinyon pine, juniper, scrub oak, manzanita, sugar bush —

Mileage Log

- 0.0 Junction of State Highways 111 and 74 in Palm Desert. Drive south toward Hemet on Highway 74 (the Palms-to-Pines Highway).
- 3.7 Cross Dead Indian Creek.
- 10.3 Pass cabin on left.
- 11.9 Junction. Turn right on paved Pinyon Crest road.
- 12.6 Junction. Turn right on dirt road. **Note:** This road may not be passable to low-clearance passenger cars.
- 12.8 Junction. Bear left.
- 12.8+ Road ends at turnaround. Dos Palmas is a few yards down slope to left. Elevation at oasis is slightly under 3520 feet.

grow beside such desert species as California fan palm, squaw tea (*Ephedra*), cholla cactus, jojoba, and desert willow.

Still another reward at Dos Palmas is the magnificent panorama from the turnaround just above the oasis: to the north and northeast, Coachella Valley with its backdrop of the Indio Hills, Little San Bernardino, Hexie, and Cottonwood mountains; eastward, a portion of the Mecca Hills and Orocopia Mountains, and the barely visible blue ridge of the Palen Range 70 miles away beyond Desert Center; southward, Santa Rosa Mountain and Toro Peak on the timbered backbone of the Santa Rosas; and to the west, drier pinyon- and juniper-dotted ridges. I could make out Willis, Thousand, and Hidden palms in the Indio Hills, as well as the gash of Pushawalla Canyon, where our trek began.

From Dos Palmas in the Colorado Desert we shall veer briefly into the southern Mojave, pausing at three appealing oases — Twentynine Palms, Fortynine Palms, and Mopah Spring. □

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DAUNTLESS IS THE

NATURE OFTEN protects wild animals by giving them colors that blend with their surroundings, sometimes changing their coats with the season. But with the common skunk (*Mephitis mephitis*), the opposite prevails. This little 12-pound wagger of chemical warfare needs no such camouflage as an aid to survival. He wears a conspicuous coat of striking black and white patterns that contrast with the green and brown background of the mixed woodlands he occupies, from sea levels to timberline,

throughout the whole United States.

When angry or frightened, the skunk sashays through a ritualistic little dance, displaying his distinctive black and white markings in the most effective way to the attention of his attacker. While raising his plumed tail over his back and stomping his feet on the ground, he warns his enemies to BEWARE! And only an inexperienced or stupid predator will be foolish enough not to make a hasty retreat.

However, if he fails to retreat, then

the skunk will discharge his anal glands, with great accuracy, in the direction of his foe. Ejecting a well-aimed double squirt of a malodorous fluid, he can hit targets as far as 12 feet away. Touching the eye, the liquid may cause severe pain and momentary blindness. Although not fatal, the results are so demoralizing that even after the predator will give wide birth to the prominent stripes of this little animal. Just the ominous raising of his bushy tail will usually send much larger animals scurrying.



COMMON SKUNK

by JULIA MURPHY

photos by Roy Murphy

Unfortunately, skunks have a fondness for chickens and eggs. And so they are sometimes shot or trapped and their fur is sold as "Alaska sable." This is sad. When we check the other side of the ledger, we find the skunk is really the farmer's friend. His worth is well proven in the way he exterminates large quantities of farm pests like rodents, grubs, cut-worms, grasshoppers and beetles.

Fearless, intelligent, and gentle, the skunk has a close family life. Twelve have been counted in one den. During

the summer the young ones trail behind their mother, often in Indian file.

In our yard we have an abundance of lizards living in the ivy and geraniums. Naturally, we are often visited by skunks. We love to watch them promenade across the patio in the moonlight. Their tails all fluffed and perky add an elegant touch to their exquisite black and white costume. One night our son got up to investigate a muffled commotion outside his bedroom. And there, with noses pressed against the sliding glass door,

were two cute little baby skunks.

Still, it seems we are more familiar with the noxious scent of the skunk's built-in chemical warfare than with its luxurious beauty. Perhaps that's why the word "skunk" usually denotes an uncomplimentary remark. Nevertheless, even in language there is good along with the bad concerning this little Jekyll and Hyde of the animal world. For instance, we might loathe that "skunk!" But, we love "Chicago"—an Indian word that means—"Skunk Place." □

The Impossib

HISTORIC SAN DIEGO & ARIZONA EASTERN ABANDONED; VICTIM OF KATRINA'S FLOOD

by BILL JENNINGS

RAILROAD that cost too much to build, never had enough business, but still captured the interest of desert buffs and rail fans everywhere is being abandoned, the principal victim of Tropical Storm Katrina last September.

San Diego & Arizona Eastern Railway's scenic Carrizo Gorge district, which covered 30 miles of track from Jacumba east to Coyote Wells, endured rainfall of up to eight inches within a three-to-four hour period. Landslides and flooding damaged several tunnels, spindly redwood trestles and many fills in the gorge itself, as well as long fills, trestle cuts and straight track from Dos Cabezas east almost to Plaster City. Since the September storm, the owning Southern Pacific Company and several shippers and public agencies had conferred many times before the SP announced in mid-February it would not rebuild the line. Officials reasoned that the estimated \$1,250,000 repair cost was too great in light of the declining revenues that had infested each year's balance sheet since World War II.

Even the economies of dieselization and removal of passenger service, both nearly 20 years ago, had not materially improved the situation. It appears the original critics were correct when they assessed the new road's chances when it was completed in 1919.

It cost too much to build, too much to maintain — with 15 tunnels in Carrizo Gorge alone — and didn't have enough traffic potential to make ends meet. At that, the original owners, the Spreckels Company of San Diego, and the Southern Pacific, had endured 56 years and for a time, during World War II, had actually turned a profit.

But in the end the same enemy that had added so many millions to the costs over the years did the Impossible Railroad in. Weather, in the form of sand-

storms and infrequent but heavy flooding, had been a major maintenance factor throughout the SDAE's relatively short life.

A direct line east had been a San Diego dream since California achieved statehood in 1850 and one of the major recommendations of the Pacific Railroad Survey of 1853 had been for a line connecting the Silver Gate port with the east. The civil war, however, ended that early dream.

A line was built in 1882 by the Santa Fe interests, but it was not a direct route. This was the California Southern, built from National City, near San Diego, to San Bernardino where it ultimately connected with the Santa Fe.

The old California Southern was the first railroad to reach San Diego, but it was still not a transcontinental, so local interests continued to scheme for a direct line east, a statement that eventually became the motto of the SDAE.

In 1893 a line called the San Diego & Phoenix was started. It reached the grand distance of 15 miles southeast of San Diego before it halted due to lack of funds, but the route eventually became the SDAE trail, through Carrizo Gorge and the Imperial Valley.

The San Diego & Arizona Railway was chartered by local interests, principally headed by John D. Spreckels, in 1906, and the impossible dream gradually took shape. Construction was slow, due to financial problems as well as the Mexican Revolution which by 1911 threatened the railroad's new route up the Tijuana Valley. In that year a construction train on the new line just east of Rodriguez Dam



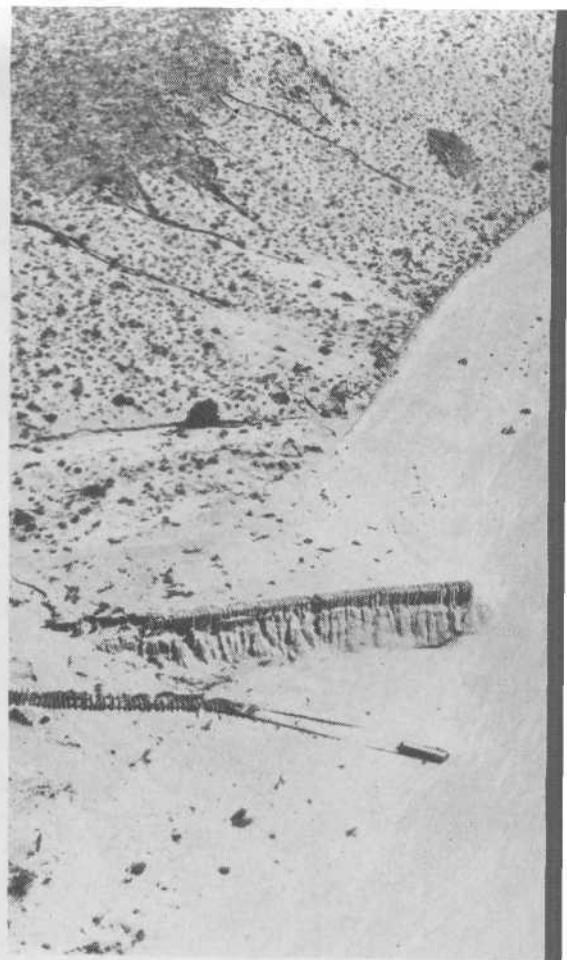
*The Goat Canyon trestle is the longest wooden trestle in the world.
Color photo by Ernie Cowan
of Escondido, California.*

the Railroad





Above: This view of an eastbound freight train shows the enormity of Carrizo Gorge and the engineering challenge of building a modern railroad through it. Construction of this 11-mile section of the San Diego and Arizona Eastern cost nearly a half-million dollars per mile and took nearly four years. Route may now become a state park trail. Below: In many areas, the railroad bank acted as a dam or sluiceway for the floodwaters, leading to scenes like this, near Dos Cabezas. So. Pacific photos.

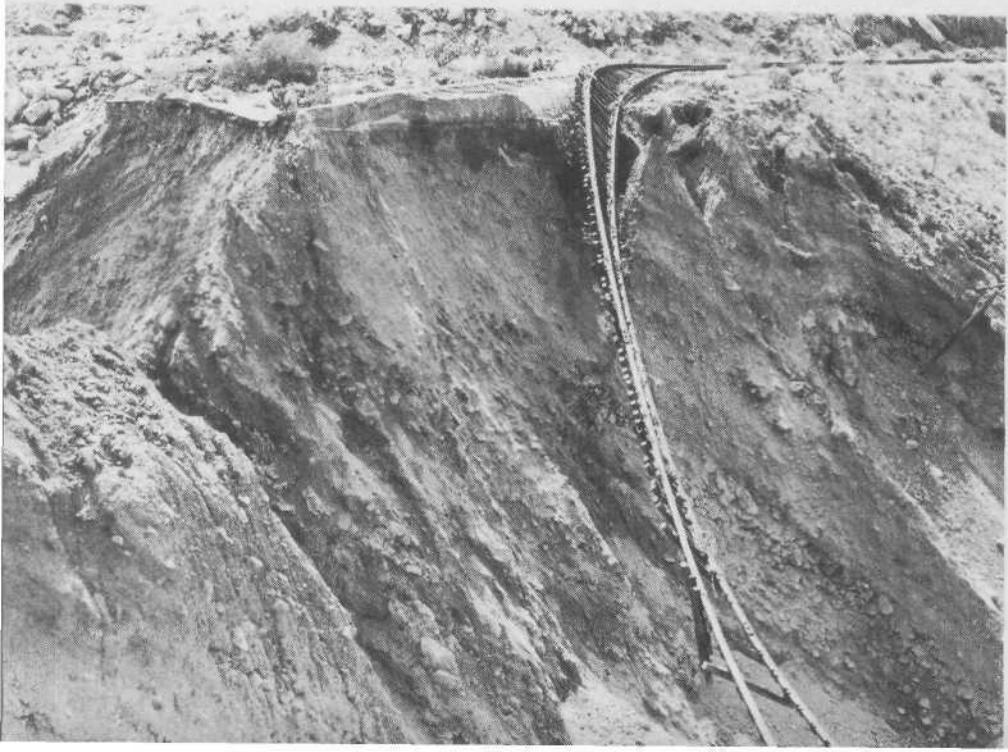


site was commandeered by rebels who staged a running gun battle with federal troops east towards Tecate.

The line progressed at a rate of about 10 miles a year, however, and by November 15, 1919, the two construction links, one west from El Centro, the other east from San Diego, were joined in a golden spike ceremony at Carrizo Gorge. Impossible or not, the railroad had been built at a cost of \$18,000,000, including 15 tunnels in the gorge, cut through solid rock and connected by redwood trestles that have outlasted the rest of the so-called "temporary" construction by many years.

From Jacumba east the line is in the desert, gradually descending to below sea level at El Centro, the eastern terminal Carrizo Gorge, which is in the boundaries of Anza-Borrego Desert State Park, has long been known as one of the railroading wonders of the world.

The track hangs high on the east slope of this canyon, which is the starting place for Carrizo Creek, one of the major washes of the park. The creek drains into the Salton Sea near the junction of State Highways 86 and 78 and on the way creates some of the best off-roading and bird-watching sites in the huge park. The historic Butterfield Stage threaded





Left: Palm Wash was the scene of the greatest damage, as this aerial photo shows. Southern Pacific photo. Right and below: West-bound passenger train, its five cars a strain for the little locomotive, threads Carrizo Gorge. The 10-wheel engine was a castoff from the old Las Vegas & Tonopah, another abandoned desert line in Nevada that gave up the ghost in 1918. Passenger service ended in 1951. [Both views, coming and going, are same train, circa 1929.]



the canyon, along the Southern Immigrant Trail, a major Gold Rush route to California.

The railroad right-of-way, which enters the park from the east near the flood-victim town of Ocotillo, climbs continuously at the rate of 2.2 per cent until it reaches the gorge. This grade is considered easy for hikers and horsemen, who may take over from the trains if park plans materialize, but it was murderous for the trains.

The writer remembers working as a trail express guard and baggageman when one engine was required for each five cars on the daily passenger train and freights would have as many as five engines from Coyote Wells, at the foot of the long hill, to Hipass, the summit of the line at 3,600 feet.

The most memorable train in the line's history was a special carrying President Franklin D. Roosevelt in 1943, but some of the other World War II "mains," as passenger special troop trains were called, were even more difficult to operate. Several required six engines and each small steamer was watched closely when it went through the tunnels to prevent sparks setting the timbers on fire.

The worst loss occurred in 1933 when Tunnel 15 collapsed completely and a

beautiful curved redwood trestle was built to replace it. The trestle, still the largest in the world of its type, is 185 feet high and over 600 feet long. It contains enough heart redwood to build more than 30 conventional houses, assuming anyone would want to use that nearly priceless timber for such purposes.

Several times since 1919 the line was closed for several months at a time, while flood or fire repairs were made. The losses proved too much for the Spreckels interests by 1933 when the Southern Pacific took over the line.

Since last September when the storm hit, rail service has ended at Plaster City, where the SDAE serves a huge gypsum mill that includes its own railroad, a narrow gauge affair that reaches 21 miles into the Fish Creek Mountains of the state park to bring gypsum ore to the mill.

At the San Diego end of the line two short branches have continued in operation to serve industrial customers in the National City and El Cajon areas. These lines are actually older than the main, constructed in the 1880s during the great San Diego land boom. They were purchased by the old SDAE in 1917 when



Continued on Page 46

This sweet desert nut— *Indian Gift to* *Southwest Cookery*

THE 1866 CROP of pinons in eastern Nevada was sparse, but in September 1867, Indians of the White Pine country made up for the earlier nut famine and were "gorging themselves with the luscious fruit." In consequence, said the local editor, "Snakes, lizards, mice, beetles and ants are having a respite, for all is 'fish that comes to the net' of Indians."

Throughout the Southwest, at elevations where the scrubby pines grow, Indians, from Pueblo country to the western deserts, depended on the nuts to carry them through winter. Prehistoric dwellers had eaten pinons, and grass-

lined pits for these and other seeds were found in Lovelock Cave in Nevada and elsewhere. Antiquity of its use is reflected in Indian legends, one telling why the pinon pine tree is dwarfed, a story of the Wolf God and Coyote God, involving Washoe, Pahute and Shoshone Indians.

When Coronado reached Acoma in 1540 the men were met with gifts of pinons. Soon after the Spaniards settled in that New Mexico country a trade in pinons was started with Mexico City. Fr. Alonso de Benavides, before 1630, extolled the superior qualities of these nuts over those known from ancient times around the Mediterranean. These were

larger, sweeter and thinner shelled, although the trees usually were smaller.

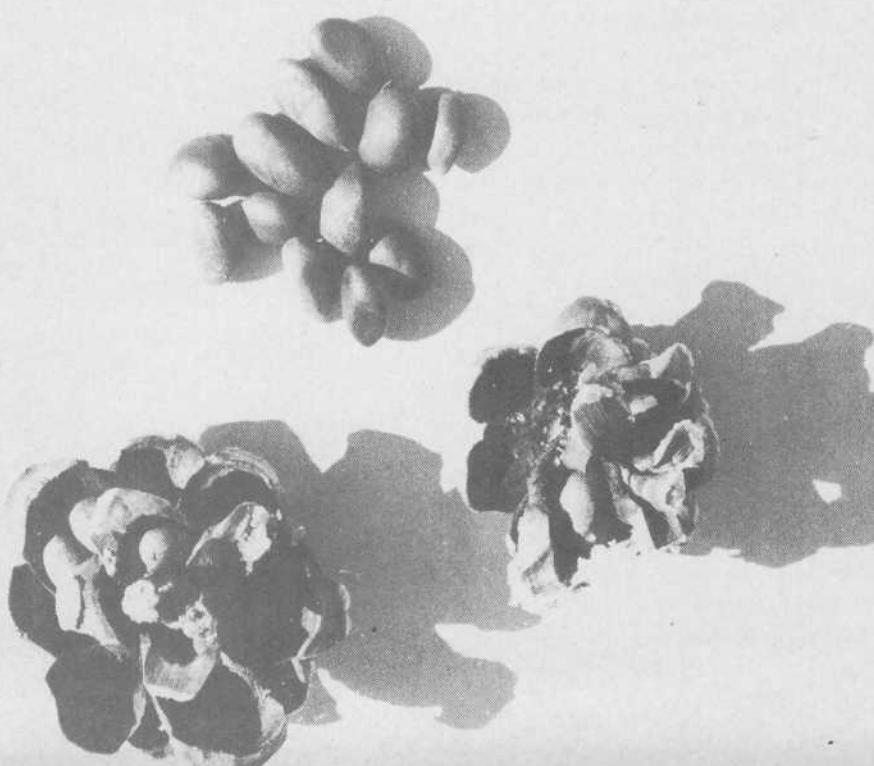
Fremont was about the first American to encounter and describe the pinon, when he and his explorers were in Nevada in the freezing January of 1844, approaching the Sierra Nevada. An old Indian came toward them, holding out a little skin bag of these delicious oily nuts. They bought the few pounds he had, then gave him scarlet cloth and other items to serve as guide. As they climbed into the forests, more Indians came with nuts to trade. Fremont praised the flavor when they roasted the nuts at their campfire. The Indians told him that sometimes they had fish, but the rest of the year their food was pine nuts.

(This proved to be a new species, *Pinus monophylla*, when Dr. John Torrey saw Fremont's specimen. Even more widespread, especially in Arizona and New Mexico, is *P. edulis*, discovered and named a few years later.)

The early pinon trade was beneficial to both Indian and white. By 1865, men, women and children of Austin, Nevada, had become as adept at cracking, eating and shell-spewing as Shoshones who traded the nuts. The morsels made pioneers forget the walnuts and chestnuts of home. Storekeepers in mining towns and fancy San Francisco markets sold them, and Indians had cash or could trade nuts for flour, sugar and cloth. Over in Aurora, below Bodie, a brisk business in shipping pinons had started in 1864.

But it was a different story when silver and gold brought in hordes of miners and others, and pines were cut for fueling furnaces at the mines — those nut

Pinon cones, Joshua Tree National Monument, open to show pinon nuts. Gum or resin clings to cone, right. Nuts above from another source.



crops were vanishing in flames and traditional pine campsites were no more. As early as 1862, Pahutes in the Carson Valley area warned wood ranchers not to cut down their trees. East of Austin, Shoshones briefly halted wood choppers, with "white man no good — cut down all pine nuts." This encounter was in the fall of 1864, a year of few nuts, when Shoshone women, on the steep slopes above Austin were gathering sagebrush seeds, a poor substitute for the nourishing nuts. By working hard all day they could gather about a gallon of these *Chrysothamnus* seeds.

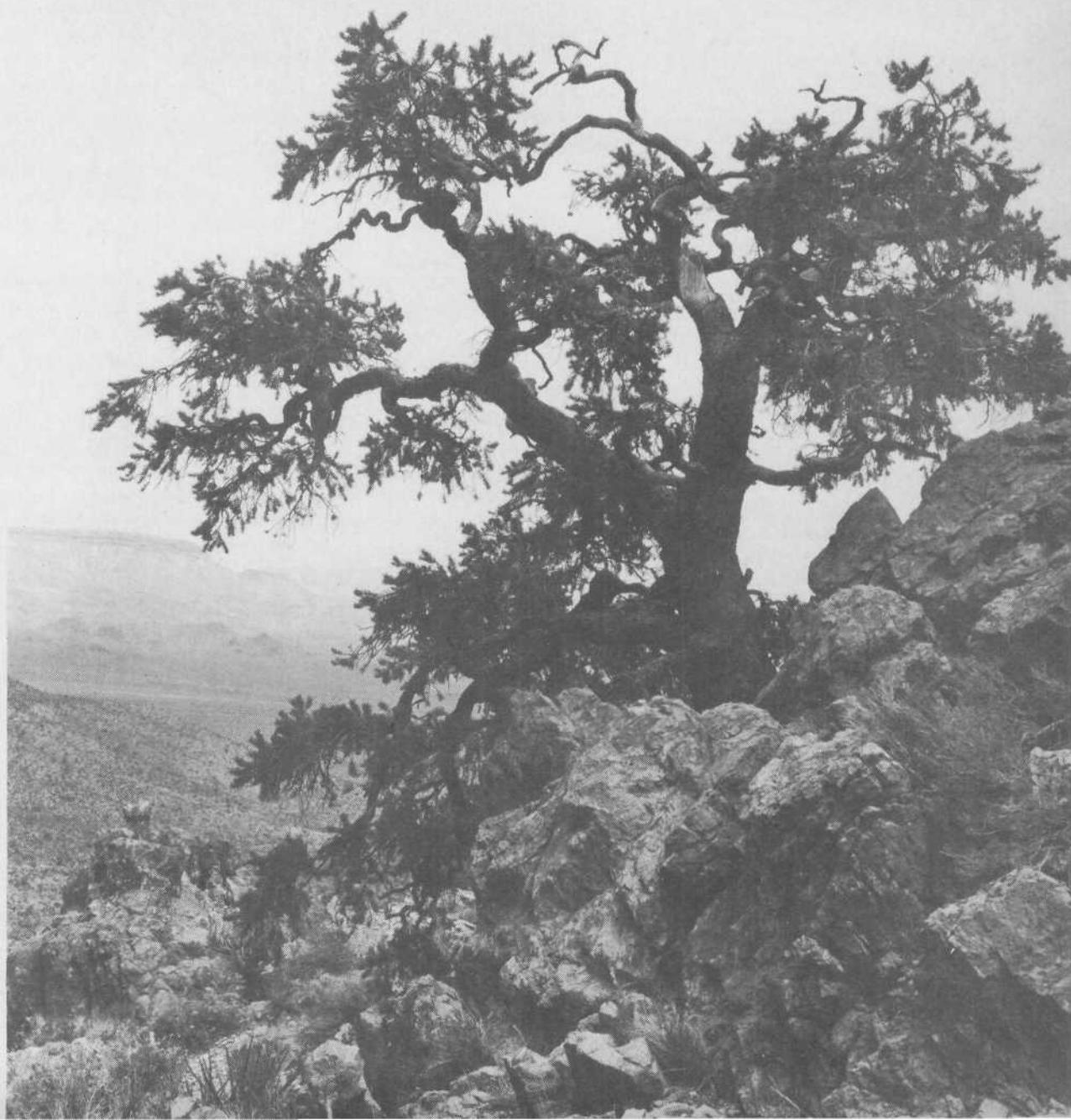
The decimation might have been even greater had the pinenut tree been suitable for general construction. Cutting of the trees caused Indians to do battle; with them it was a matter of survival. Their dependence on pinons was noted by whites not only in Nevada but also in Owens Valley of California, where in the 1860s some of the Indian defeats were due to destruction of their stored nuts. In one camp alone soldiers destroyed 300 bushels of pinons, or 2400 gallon measures.

In the San Bernardino of 1868, whites had become aware of pinons as they

watched the annual expeditions by Indians of that valley. With horses, provisions, baskets, and bows and arrows, they gathered at a rendezvous north of town, then set off for the high mountains, under Chief Juan Roca. Where once they had gone free to their traditional sites, now for their own protection from miners in the Holcomb and Big Bear areas, who might consider the group a threat, they were required to carry a paper listing their purpose, home, and length of time expected to be absent. The many grinding holes attest to the generations of Indians who ground

by LUCILE
WEIGHT

photos by
Harold O.
Weight



Pinon tree
in craggy
heights of
Providence
Mountains,
Mojave
Desert.

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pinons to meal in the autumn camps.

This fall migration apparently was not understood by some of the Indian Service men, for in October 1872 the sub-agent in Nevada was unable to complete his census as the Indians in the southeast part of the state were away gathering pinenuts.

The pinon was still the most important food of Pahutes, Shoshones and Panamints in 1891, in and around the Great Basin, when Dr. C. Hart Merriam was on the Death Valley Expedition of the U.S. Department of Agriculture. The natives there gathered them much the way as did the Cahuillas, above Coachella Valley. Pronged sticks were used to pull or beat down the cones, still sticky with gum. They were piled on a heap of brush, set afire to open the cones, releasing the nuts.

Over in Navajo country, pine-nutting was a gala family affair. In very early days the pinons were collected in deer-skins, and the extracted nuts were parched in baskets with hot coals. In the 1930s and later, old and young piled into wagons, with small tins and baskets and cotton or tow sacks. They gathered where prehistoric people once shook down the nuts and ground them in stone now worn deep and smooth on Anasazi sandstone rims. In years of heavy crops on Black Mesa or below Betatakin ruin, a trading post like Shonto would buy as much as 70,000 pounds. Most of the supply went to wholesalers in Gallup, then on to New York.

Echoes of those early days when Indians had to carry special papers to gather nuts at ancient camps and when commercial interests cut down their trees were heard in the 1950s when the Bureau of Land Management was issuing rules for collecting. Those getting nuts for their own use could take up to 25 pounds free — not much of a supply for an Indian family for winter. Commercially, the BLM called for sealed bids, according to August 1976 reports, but in 1953 was selling them for two cents a pound under contract. At that time two Arizona firms contracted for 1500 pounds in White Pine county, Nevada, and imported Navajos to do the collecting. And already 50,000 pounds had been sold in western Nevada. Moreover, the BLM was issuing permits for cutting of pinons, and again out of state people were imported.

Branch tip of pinon showing thick exudation of resin from unopened cone.

Declared one objector, "Why, if a man can make \$1,000 profit in a few weeks cutting Christmas trees, did not Nevada men have the chance to do the work? Some of our Indians on Reese River have been out of work. Why were people imported from other states to pick pine-nuts and cut trees? Our native Indians know our mountains, they are excellent woodsmen, let's give them a chance!" Apparently many of the trees had been cut illegally. A BLM spokesman at Ely (where Nevadans had to obtain their free-nut permits) said that 50,000 trees in the Ely area had been cut in 1952, only 5200 of them sold under contract.

Once you have your pinons there are many ways to use them. For some, pinons roasted in the wild or at home in the oven are the best. In addition to using this tidbit unadorned, Indians ground it into meal to combine with varied seeds in pinole, or consolidated and baked it into little cakes or balls. Zunis mixed it with sunflower cakes, or made it into a paste as a spread for hot corn cakes. Havasupais mixed it with honey for infant food. In Pueblo communities pinons and sunflower seeds, parched and ground, were added to soups and stews, to bread and to corn-meal mush or atole.

As Indians were able to live more modern lives they added their traditional foods to new products, creating a distinctive cuisine appreciated by many whites. Old World dishes are unlikely to gain the popularity in the Southwest that the Indian-American have. This despite those classic dishes of Italy and Spain, of Greece and Turkey in which the Mediterranean pinenut is combined with rice and raisins, with lamb and garlic.

One modern Pueblo recipe for pinon cakes uses the ground nuts with whole wheat flour baked into small thin cakes on a griddle, then served hot with honey. The roasted nuts also are used in a pumpkin bread recipe, with brown sugar, butter, eggs, flour, baking powder and spices.

Calorie counters should keep in mind that pinons are very rich in oil. These cakes by a modern Serrano Indian, for instance, had better be served with a



thinning salad. Martha Chacon, of San Manuel Reservation near San Bernardino, mixes pinon meal and salt with enough water to make a stiff batter. After it stands an hour, drop into hot oil to make cakes three or four inches across; brown slowly on both sides, and serve hot or cold.

Pinons are delicious with a rice ring mold. Or add them to cooked rice, ground meat and herbs to stuff cabbage leaves, then steam. Or use this plus golden raisins to steam in grape leaves. Coarse-chopped, they are good added to steamed and mashed squash (yellow-meatened), then baked. Or add to whole-wheat muffins with a touch of honey. Add pinons to fine-chopped celery and herbs to stuff tomatoes for salad or baking. The nuts are good added with mixed vegetables to turkey or chicken soup.

Pahute Patties are a type of cookie I've made, the nuts coarse-chopped. In this form, too, they are good to cook with any fine-type cereal such as grits, farina or cream-of-wheat, with a little honey. Or use them in confections such as panocha.

If you want to go elegant, with James Beard, combine pinons with cooked rice,

crab meat, onions or shallots, sherry; sauté lightly and serve on toast rounds or points.

Pinons can be used as nut butter by adding a bit of salad oil, in an electric blender, a mortar with pestle, or fine blade of food chopper. Make up in small amounts as it is rich and delicate. The butter can be used as a spread, filling, or added to pudding, a seafood sauce, or any cooked food.

From time to time many of us desert people, who have watched the slow struggling growth of shrubs and trees, shudder at stories headlined and telecast, inflated from some small report or obscure local news note. This has happened to pinon trees. One such story turned up as far back as 1950, announcing a "new industry . . . to produce the rare oil of cadinene and turpentine from raw gum" of pinons, as a base for perfume, fixative for soaps, and as a base for fruit-insect spray. With all the trees being cut, legally and illegally, and such threats of "industrial" inroads on this food-tree of the desert mountains it is past time to wonder whether this will join the other endangered gifts of this earth. □

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Porcupine Rim

FOUR-WHEELING IN UTAH

by FRAN BARNES

A LINE OF 11 four-wheel-drive vehicles strung out behind the one I was riding in. The Grand Mesa Jeep Club, from Grand Junction, Colorado, was on its annual field trip into the wild country of southeastern Utah and, as happens now and then, they had asked me to guide them along some tough trail of my choice that was new to the group.

I had decided to take them into an area quite close to the prosperous little town of Moab, but so isolated by terribly broken terrain that it is entered only occasionally by stockmen and prospectors, and rarely by anyone for the sole purpose of enjoying its rugged, challenging trails and outstanding scenic beauty.

The driver of the vehicle in which I rode was a woman, a plucky and competent young nurse who saw nothing unusual at all about a single woman fighting a tough-to-handle four-wheel-drive machine along trails that often presented problems for men with years of driving experience.

As she drove, I used her CB to tell the others in our backcountry safari about the wild country through which we were traveling. Between my comments, the CB channel we were using crackled with cheerful banter between the various vehicles. To minimize the dust problem, each vehicle kept well back from the next one ahead, but the CB radios made a cohesive, unified group out of the caravan, even though they were strung out over a mile of dusty, sandy trail called the Sand Flats Road.



Above: Some years, the only vehicle trail to isolated Porcupine Rim is still covered with snow along one stretch, even in late spring. Left: Porcupine Rim, Castle Valley and Castle Tower.

I had planned a route that would add still another rough but scenic two miles to the basic trail to Porcupine Rim, so I watched carefully for an inconspicuous side trail that would not even be noticed in this rough terrain of sand and slick-rock by anyone not specifically looking for it.

There it was, just ahead. I signalled the driver to stop, then thumbed the mike on her CB. "Short stop here for putting in hubs, for those who need to.

You're going to need all four from here on."

This announcement brought a burst of answering wise-cracks about the terrible driving capabilities of various men in the group. This was just one more phase of the continuous friendly competition between the club members to see who could get into trouble on the trail the least, and who had to be pushed or winched out of some bad spot. It is always fun to travel with the Grand Mesa Jeep Club.

On our way again, the safari proceeded onto a rough but easy trail that crossed a mile or so of sand flats broken by outcroppings of eroding sandstone slickrock. We paused at one point to open a wire gate in a cattle-control fence, then signalled by CB for the last vehicle to close the gate.

Not far beyond the fence, I chose another branching trail that soon approached a steep slope dropping off sharply toward the rim of a sheer-walled canyon that twisted through a tortured landscape of broken, eroding sandstone that had few parallels this side of the surface of Mars. The trail down to this rocky rim descended an immense dune of shifting sand at an angle and grade so steep it was doubtful that even a four-wheel-drive vehicle could ascend it.

But down we went, one by one, in what might be described as a controlled slide. At the canyon rim, we turned up-canyon, and the trail became

very rough. Within a short distance, I noticed a big gap in our caravan. My young driver, with just a hint now and then on how to approach a bad spot in the trail, was having no real trouble, but chatter on the radio told me someone else was.

Not for long, however, and within another mile the safari came to a stop, right where the trail hugged the canyon rim it paralleled. The view down into the deep, sheer-walled chasm was breathtaking, and the several children with the group were cautioned about the dangerous drop, even though most were quite accustomed to being wary of dangerous terrain.

Our safari struggled steeply upward for another mile or so, with the rough trail totally preoccupying the drivers, and the woods too dense for much scenic viewing by passengers. I watched for a certain outcropping of rock as the trail finally leveled off a little. As I signalled for a halt, it was possible to get glimpses through the trees toward our left of the great canyon system we had just skirted, but a steep slope of tree-studded slickrock on our right gave no hint of what lay in that direction.

As people piled out, presumably for a stretch after that last bad length of trail, I shouted for everyone to follow me, then started climbing up the slope to the right of the trail. After about 50 feet, the climb topped out, and I paused to let the others catch up.

As they did, a few at a time, a chorus



of gasps broke out, because we stood on the very rim of a broad and spectacularly beautiful valley—we stood on Porcupine Rim, high above lovely, unique Castle Valley.

Below us, the solid sandstone rim fell away in a sheer cliff for a hundred feet or more, then continued downward for another 1,500 feet as a monstrous, steep talus slope. This sparsely wooded slope eventually blended into the valley floor far below. Jutting up from that floor not far from us was an immense, rocky upthrust—Round Mountain, seemingly a solitary peak, lost from the high La Sal mountain range that sprawled across the upper end of Castle Valley.



Left: One end of Porcupine Rim ends in the high slopes of the La Sal Mountains, which add to the beauty of the broad panorama visible from this lofty, isolated ridge.





Right: With few promontories or breaks, lofty Porcupine Rim is almost perfectly straight for 12 miles. Left: The trail to Porcupine Rim parallels the branching Negro Bill Canyon system for several miles.

The far side of the broad valley, some three and one-half miles from where we stood, rivaled the La Sals for scenic beauty, but in a completely different way. A huge, sheer-walled peninsula of salmon-hued sandstone jutted out from the mountain slopes toward the distant Colorado River gorge that Castle Valley joined far to our left.

Eons of erosion had left this great wall of sandstone broken into segments. The intact upper peninsula was called Adobe Mesa, and once I had stood upon its lofty, lonely and remote tip, overlooking Castle Valley from that rarely-seen viewpoint. A great gap separated the tip of Adobe Mesa from the nearby spire of

Castle Tower, a tall and slender finger of monolithic sandstone standing on a gigantic, layered pyramid of dark red sandstone deposits.

Next in line on the far side of Castle Valley was a huge fin of sandstone, fully as tall as Castle Tower and standing on a similarly laminated base of ancient red rock. One end of this fin was broken into immense jagged spurs of rock that looked like human figures in a familiar tableau. The group had been named the "Priest and Nuns," and bore a startling resemblance to a robed priest, standing before two kneeling and cowed nuns.

Castle Valley — in all of its unmatched splendor — lay below, as our

little group stood in stunned silence on Porcupine Rim, partly awed by the sheer beauty of the half-circle panorama that stretched out below, and partly shocked by the surprise of coming upon it so suddenly, so unexpectedly, after a tough, blind stretch of vehicle trail.

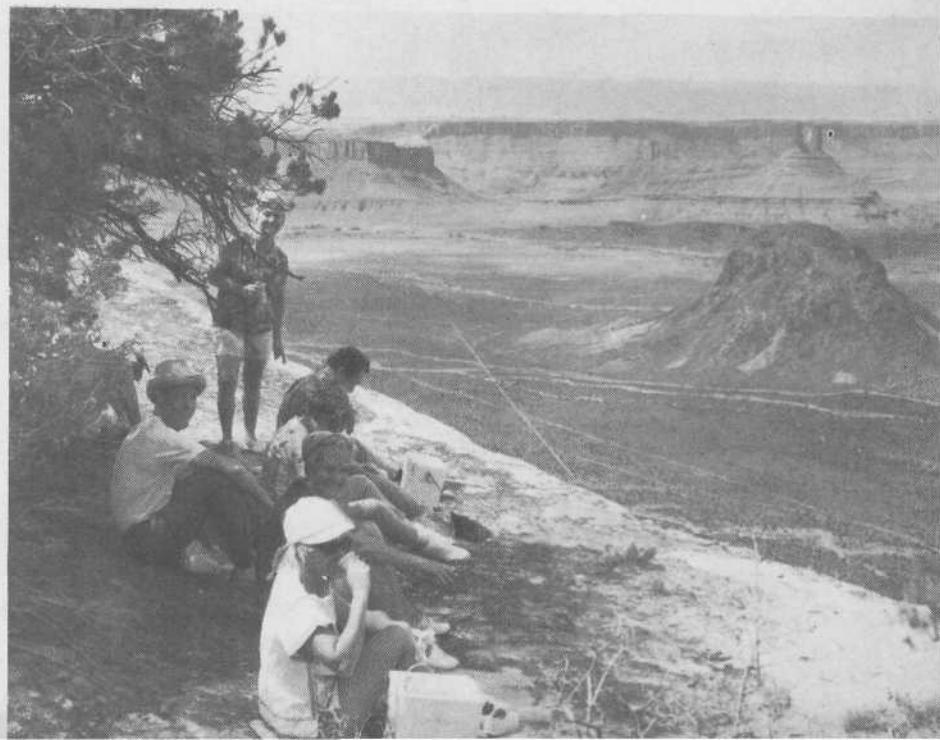
After many pictures had been taken, we headed along our trail and within the next several miles, the trail actually traveled right on the edge of Porcupine Rim in a few places, affording excellent views even from the vehicles, and closely parallel to the rim the rest of the time.

Then, slashing gorges forced the trail to leave the rim. As we descended into

Continued on Page 39



Left: In several places, the Porcupine Rim off-road vehicle trail approaches very closely to its rocky edge, affording unparalleled scenic views. Right: What more spectacular place for a picnic lunch than right on the edge of Porcupine Rim, with Castle Valley below!





Flanigan's last buildings [above] stand at the edge of the townsite against a background of the snow-dusted Virginia Mountains.

Posts and a gravel driveway [right], lined with railroad ties, mark the site of a vanished building. Foundations of Western Pacific structures can be found along the line of telegraph poles in the background.



THE SENATOR'S EMPTY TOWN

by ERIC N. MOODY

THE PLACE is not hard to find. It lies in the central part of Nevada's Washoe County, six miles from the California line and some 60 miles north of Reno. It can be reached from Susanville, California, or from Reno, which is the most convenient starting point.

On the southern approach, the traveler takes State Route 33 to desert-circled Pyramid Lake, then continues up along its western shore past Sutcliffe and Warrior Point Park, where the paved road becomes a gravel one. Near the north end of the lake, just beyond the Needle Rocks, the road divides, one branch turning left toward the northwest, the other bearing right toward the upper rim of the lake. The traveler takes the left

fork and proceeds along an abandoned Southern Pacific roadbed, through unpretentious Astor Pass and by a turnoff to Fish Springs, into the easternmost end of Honey Lake Valley. Ahead in the distance railroad tracks appear; on the left is a green highway sign, which once bore a name but has been defaced so that it is unreadable. The traveler turns at the sign and proceeds almost another five miles past mud flats until he reaches a road that dips into the valley to his left, threading its way toward a ranch on the far side.

In the bottom of the valley, a few hundred yards west of where a Southern Pacific line from Susanville joins the Western Pacific main line to share a single span into the Smoke Creek

Desert, the traveler (if he is looking for them) will see a handful of dilapidated wooden structures rising above the sagebrush. Driving toward them, he will know that he has found Flanigan, Nevada, one of the newest additions to the Great Basin's long roster of ghost towns.

Flanigan is not a typical ghost town. It was not a mining camp, nor even one of the basin's smaller number of agricultural settlements. Instead, it is a railroad ghost—and a 20th century one at that.

Flanigan began its existence in 1909 when the Western Pacific Railroad laid its tracks across Nevada and established a station northwest of Pyramid Lake. The station was located on ranch land owned by Patrick L. Flanigan, a prominent

businessman, sheep raiser and former state senator from Reno, and it was named for Flanigan when he gave Western Pacific a right-of-way across his property. Senator Flanigan probably appreciated the honor conferred upon him by the railroad, but there is no evidence that he ever took an active interest in "his" station or the town that soon grew up next to it.

For several years the station's future seemed unpromising, as it served only as a shipping point for ranches in remote central Washoe County. Then, in 1912, the Southern Pacific Railroad began building a line between Westwood in California and Fernley, Nevada, where a connection was to be made with the railroad's main east-west route. Early in 1913 Southern Pacific construction crews, moving up from the south, hammered their tracks across the Western Pacific line at Flanigan and proceeded on toward Susanville and Westwood. Southern Pacific erected a number of buildings at the Flanigan junction, among them two bunkhouses, a tool house, a signal maintainer house and, inevitably, an outhouse. Also, a well was dug and a windmill set up.

The time was ripe for further development. Or so it must have appeared to two California speculators, C.A. Ross and G.L. Warukin, who bought land immediately west of the railroad intersection and laid out a townsite in the V between the tracks. They had ambitious plans for the proposed community, judging from the plat they had drawn up. There were to be almost 30 residential and business blocks, containing more than 800 lots,



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and large sites were set aside for a school and library.

In February, 1914, a post office opened. In 1918 the Southern Pacific put up more buildings, including another bunkhouse, a woodshed, and section, tool and cook houses. Western Pacific structures were also added, and a general store was established to serve a fluctuating population of railroad station employees and track crews, neighboring ranch families, and the occasional visitors who came in by rail or over the dusty dirt roads that led into the town.

However, despite some structural additions, Flanigan did not grow as its promoters hoped. It continued to be only a small, sleepy community, dependent upon the railroads for its very life. The townsite remained almost unoccupied; there were never more than a few dozen people living in Flanigan, and many of these resided outside the townsite where the railroads had located their buildings. The school and library were never built, although the one room Bonham Schoolhouse was moved to the town from a nearby ranch in 1929.

During the 1930s, Flanigan's popula-

tion received a slight boost when a few county road employees took up residence there. Toward the end of the next decade a lime company operated briefly out of the town.

The 1950s saw the beginning of the end for Flanigan. The Western Pacific removed its personnel, and in the spring of 1959 the Southern Pacific, in an economy move, withdrew its crews. Demolition of the Southern Pacific buildings began. In 1961 the post office closed, leaving only the Bonham School (which served children from area ranches), a handful of wooden buildings and an occasionally used Southern Pacific car-body depot to carry on the town's existence. Just one permanent resident remained, a retired schoolteacher who had served as the town's last postmistress.

In the summer of 1968 the final bell rang and the last class was dismissed at the Bonham School. With the closure of the school and the departure of its commuting teacher and students, nothing more than abandoned buildings and the Southern Pacific's car depot were left to identify Flanigan—and in July, 1971, the Southern Pacific retired from its lingering connection with the ghostly community when the railroad's Flanigan to Fernley line was abandoned. The car depot disappeared, as did the school building soon after it was shut down.

Today, no one lives in Flanigan and it has vanished from state highway maps. Only four deteriorating cabins and a fading yellow caboose, long ago moved to town and converted into immobile living quarters, remain standing there. Foundations can be seen at the school site, which is located just north of the surviving structures, at the head of a weed-choked gravel driveway, and around the track intersection where the railroad buildings were. A junked car reposes at the edge of the townsite near the weathered cabins, and pieces of lumber and trash dumps litter the area.

Western Pacific and Southern Pacific freight trains still rumble by, but there is no longer any reason for them to stop. Only the passing pickup trucks of ranchers, occasional trackwalkers and a few curious visitors—ghost town buffs, bottle hunters and the like—disturb the silence of the place and feel the persistent northwind as it blows through the remnants of Senator Flanigan's deserted town.

MANY MOONS BY RUSS & NORMA McDONALD



"SKIN TWO RABBITS -- CUT INTO --"

PORCUPINE RIM

Continued from Page 35

the vast sandstone wilderness to the west, my guidance became even more necessary, because old prospecting trails branched off in all directions. Most of these trail spurs soon dead-ended at some steep drop, or against a sheer bluff, but I led the safari along a route I had discovered earlier by the simple but time-consuming method of trying every trail until I found what I wanted.

The route we took soon became easier to follow as it crossed open areas, then got difficult and rough once again as it descended a series of gigantic terraces toward the distant outcropping of sandstone that was my goal. As we neared that huge quarter-mile-long fin of up-jutting rock, I led the safari up onto the broad expanse of solid slickrock that served as a base for the great monolith. We crossed this rock base, then dropped down onto a slightly lower terrace of stone where everyone gathered for a picnic lunch.

After we had eaten, I took the group on foot along the canyon rim we had parked beside. As we walked, that canyon fell sharply away below us to join a gorge that had not been visible from our lunch site. Soon we stopped, all struck by the beauty and majesty of what lay below us — a great bend in the majestic Colorado River gorge, with that silt-laden, green-bordered river winding ribbon-like at the bottom of its deep and narrow canyon.

After another half-hour of picture-taking, hiking around and rockhounding among some curious minerals just back from the canyon rim, I headed the group back along the long, rough trail. After several miles of steady travel, I again called a halt, and took up the CB mike.

"Would anyone care to follow my lead on a spur trail I have been wanting to explore — with no guarantees as to its passability or destination?"

After some discussion, about half the group decided to wait, as the more adventurous followed my lead into unknown territory. To give my driver a well-earned rest, I took over the wheel of the lead vehicle.

Down we went, into a rugged, wooded canyon, then across a rocky wash bottom that contained a tiny flowing stream.

Here, one of the following vehicles got hung up for a time on a rocky ledge. Beyond the stream, the trail climbed very steeply, and was extremely eroded. After a time, the trail became obscure as it crossed an area of slickrock.

There, I climbed out and walked ahead to find the way, signalling my co-driver in her four-wheel-drive. As I found a suitable route and walked ahead up the steep slope of almost solid rock, I became excited. Although I could see nothing ahead of me but an ascending slope of sandstone, there were indications that Porcupine Rim was not far ahead. Abruptly, the slope leveled off, I walked through a small copse of trees and there — spread out below me like a gigantic, three-dimensional map — was lower Castle Valley, from a viewpoint seldom seen by anyone.

Soon, I was joined by the rest of the group, and once again the magic of this incomparable area held us in awe. After we had scrambled around seeking the best picture angles, we reluctantly headed back toward the other half of our group, already telling them over the radio about the successful exploration they had missed.

As our trail finally left Porcupine Rim and headed down toward the great canyon system that blocked all but one access route to a whole rugged sandstone wilderness region, the group's CB radios were kept busy with chatter about the day's adventures, and misadventures, and compliments were passed up to my driver for her stellar performance as group-leader-for-the-day.

After rounding the canyon head, I watched for a side trail that would lead out to the Sand Flats Road by a shorter route than the one we had followed that morning, thus bypassing about three miles of tortuous trail.

As we topped out of the steep short-cut trail and joined the graded dirt Sand Flats Road, then headed down this fairly easy road toward distant Moab, the radio chatter grew less and less frequent.

It had been a full day and a long, rough trip — but only by taking such a trip, guided by someone who knows that piece of rugged sandstone wilderness, can you reach and enjoy the magnificent scenic splendor of Porcupine Rim, the lofty southwestern rim of spectacular Castle Valley, in the canyon country of colorful southeastern Utah.

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PHOTOCHROISM: A New Term

ONE OF THE most unique and valuable of all gems is known as alexandrite. It has sometimes sold at higher prices per carat than the finest diamonds. Alexandrite has two attributes that contribute to this value. First, it is 8½ in hardness, nearly as hard as sapphire and ruby. Second, it shows a fine green in daylight, and a delightful purple in ordinary incandescent light. The green color is visible in fluorescent light, which is somewhat similar to daylight.

Even though this color change property is well known, it is not completely understood. Presently, there is some discussion as to just what happens in each type of light, and exactly what we see.

The effect is not restricted to this gem, which is a variety of the mineral chrysoberyl. The color change has been fre-

quently observed in sapphires (the mineral corundum) and other minerals are also suspected of having this color change. The change is thought to be due to an impurity of a chromium compound. Evidently, however, the story is not that simple, and here is where the discussion starts. We will not get involved with it at this time, as we do not feel that all facts are known.

About 30 years ago a type of synthetic corundum was made that showed the color change, but it was not exactly like alexandrite. A synthetic mineral is a man-made material that is exactly like a true mineral. As this was not chrysoberyl, but corundum, it should not be called synthetic alexandrite (which it often is), but the correct name should be alexandrite type synthetic corundum. Obviously, such a long term could not be popular in the jewelry trade, and it is not used.

Recently, at least two companies have succeeded in producing a true synthetic alexandrite. One of them, in California, produces material that looks almost exactly like true alexandrite. The other, in New Jersey, makes a material that has an excellent color change, but it does not really look like true alexandrite.

The most intriguing part of this color change story is that it has long been without a name. In the past, whenever it was discussed, it was referred to as the "alexandrite effect." We assumed that with the advent of a true synthetic alexandrite chrysoberyl, someone would introduce a name for the effect. We have waited in vain for this to occur.

Presently we are engaged in writing a revision of our book, *Faceting For Amateurs*. When we discussed minerals we began to object to using the term

"alexandrite effect" when we wrote about minerals showing it. Finally, we decided that there should be a new term, and if necessary we would try to introduce one. We discussed the idea with some of the better known mineralogists, and each agreed that there should be a term, but no one came forth with one.

As a result, we have taken the liberty of introducing a new term in the second edition of our book, which will be published soon after the appearance of this column. We have discussed the term with a number of mineralogists. Even though some of them have not joyously accepted the term, none have suggested that we do not use it.

We have decided to use the term "photochroism" to describe the color change in minerals when they are subjected to different types of light. The term is from the Greek; *photo* — light, and *chroien* — to color. Thus a photochroic mineral is one that is colored by light. We "borrowed" the term, in a sense, from another mineralogical word — pleochroism. This refers to a mineral showing two or three colors through different directions. The prefix of this term is also from the Greek; *pleos* — more. This then means more color, and refers to the fact that a pleochroic mineral shows more than one color.

Subsequent to our decision to introduce the term photochroism, we did a small amount of research on man-made materials for inclusion in our new edition. Many of these materials have no known natural counterpart, and in a sense cannot really be called synthetics. These have been developed for industrial uses; most of them for laser manufacture. A laser is a unique device where light can be made more intense when it is passed through certain transparent substances. There was a rush to make new types of these substances, and some of them have gem potential.

Most of these substances are absolutely colorless in the pure state, and as such can be useful in laser applications. Investigators found that if small amounts of impurities were introduced at the time of the manufacture, a color was added to the material, and it behaved differently in the laser application. A side effect of this was the potential of different colored gems. Gem cutters are overjoyed with the prospects.

When we examined some of these new

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man-made materials, we found that some were photochroic. Thus, photochroism has been pushed beyond the realm of natural minerals.

Some of these new materials have some interesting names, often simply an acronym of the first letters of the chemical constituents. Thus, YAG refers to Yttrium Aluminum Garnet; and YALO to Yttrium Aluminum Oxide. One of these goes by the unbelievable name of SOAP, which we will not try to explain, but we can definitely say that it is worthless in the bathroom!

Our first experience with SOAP was a bit of a shock. We found it to be photochroic beyond expectations — purple in daylight, pink in incandescent light, and blue in fluorescent light. This leads to a question — what color is the material? We had always assumed that daylight and fluorescent light (which we knew were not really identical) had the same effect upon the photochroic materials. There went another so-called fact! At this point, if we had any doubts about introducing the new term, now we were certain it was needed more than ever.

We are not certain that a publication such as *Desert* is really the place to discuss a new technical term. Nevertheless, we feel that the term should have better circulation than among the relatively few that buy our book, which in itself is somewhat technical. So here it is readers! We are sure that many of you will take a "ho-hum" attitude about this new term, and with this we can sympathize. In the process, however, we hope that most of you will gain some understanding about the color change in minerals such as alexandrite, whether or not you remember the new term.

For those of you that are intrigued by the term photochroic, and what it describes, we hope you will search out some of these interesting materials.

Regardless of whether you like or dislike our new contribution to mineralogical terminology, we would like to hear from you about it. In the past, both the editors of *Desert* and we have enjoyed your letters. We have been somewhat lax in that we have not always answered all letters promptly, but regardless, we have greatly enjoyed them. We do not make any promises to answer all letters concerning your thoughts on the term photochroism, but we invite you to comment. □

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BIRDS OF WESTERN NORTH AMERICA, Paintings by Kenneth L. Carlson, Text by Laurence C. Binford. Great care has been taken in reproducing Kenneth L. Carlson's 50 paintings in their true-to-nature colors, and the portraits are as accurate in detail as they are aesthetically pleasing. Text is informative, but not overly technical, and data are included on size, range, habitat, diet, nest, eggs and familial relationships. An unusually beautiful book, and highly recommended. Hardcover, large format, \$25.00.



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FROSTY, A Raccoon to Remember by Harriett E. Weaver. The only uniformed woman on California's State Park Ranger crews for 20 years, Harriett Weaver shares her hilarious and heart-warming experiences of being a "mother" to an orphaned baby raccoon. A delightful book for all ages. Illustrated with line-drawings by Jennifer O. Dewey, hard cover, 156 pages, \$5.95.

GHOSTS OF THE GLORY TRAIL by Nell Murbarger. A pioneer of the ghost town explorers and writers, Miss Murbarger's followers will be glad to know this book is once again in print. First published in 1956, it is now in its seventh edition. The fast-moving chronicle is a result of personal interviews of old-timers who are no longer here to tell their tales. Hardcover, illustrated, 291 pages, \$7.00.

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YOUR DESERT AND MINE by Nina Paul Shumway. A significant history of California's Riverside County's date culture from its origins to the present. A fascinating, true story of the fascinating Coachella Valley. Limited quantity available. Hardcover, an historian's delight, 322 pages, \$8.95.

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DESERT EDITOR by J. Wilson McKenney. This is the story of Randall Henderson, founder of DESERT Magazine, who fulfilled a dream and who greatly enriched the lives of the people who love the West. Hardcover, illustrated with 188 pages, \$7.95.

GHOST TOWNS AND MINING CAMPS OF CALIFORNIA by Remi Nadeau. Once again available, this excellent book preserves the myths along with the history of the ghost towns of California. Paperback, 278 pages, well illustrated, \$4.95.



SHELLING IN THE SEA OF CORTEZ by Paul E. Violette. The shelling techniques described here are applicable anywhere. With the guides included in this book, you will be led to the most probable locations of each particular type of shell. You will be told what to look for, the best times to search in relation to the tides, and how to preserve the specimens. Paperback, well illustrated, 96 pages, \$2.45.

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SOUTHERN IDAHO GHOST TOWNS by Wayne Sparling. An excellent reference describing 84 ghost towns and the history and highlights of each. Excellent maps detail the location of the camps, and 95 photographs accompany the text. Paperback, 135 pages, \$3.95.

BUTCH CASSIDY, My Brother by Lula Parker Betenson. Official version of the authentic life story of Butch Cassidy, actually Robert Leroy Parker, famed outlaw of his native Utah and adjoining states, told by his surviving sister. The book also offers a new look at Utah Mormon history by a participant. Hardcover, many rare pictures, 265 pages, \$7.95.

MINES OF JULIAN by Helen Ellisberg. Facts and lore of the bygone mining days when Julian, in Southern California, is reported to have produced some seven million dollars of bullion. Paperback, well illustrated, \$1.95.

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IMPOSSIBLE RAILROAD

Continued from Page 27

the road was still known as the San Diego & Arizona. The word "Eastern" was added to the corporate title in 1933 when the Southern Pacific took over.

The Plaster City line will remain in service. The daily "roustabout," as the local freight from El Centro is known, for a long time has been the only profitable part of the SDAE. Its continuance is some balm for rail fans because it assures a rail connection for the only operating narrow gauge line in California, the captive Plaster City ore run.

San Diego area trackage is part of the abandonment package but may be acquired by the Santa Fe or a new carrier, formed for just that purpose. Time will tell.

One thing is for sure, the Impossible Railroad itself is gone. Spreckels' dream of a direct line east vanished last September, just as surely as it seemed destined to do more slowly, as State Highway 80, now a unit of the interstate system, gradually siphoned off the freight business.

Ironically, the reason the line was permitted to keep building during World War I, when all other rail construction ceased by U.S. orders, was because of its tremendous importance to the military. For years, including World War II, it was considered of prime importance. The irony comes in that the military no longer needs or uses the SDAE so its national

At the east entrance to Carrizo Gorge damage included huge boulders washed onto the track from eroded hillside cuts.

security import will not require its rebuilding.

During World War II, the old California State Guard maintained 24-hour patrols in Carrizo Gorge and other vulnerable locations along the line and until last September the Southern Pacific maintained daily patrols to prevent loss of the bridges and tunnels.

State park plans to utilize the right-of-way are being watched with interest because the line is a vital connection with the park's several camping and scenic sites in the Inkopah Gorge area. If the line is taken into the park system, several more camping and hiking areas will be attainable. There are springs and hidden campsites in several coves along the rugged mountain escarpment but in the past the access has been illegal due to the railroad ownership. For years, the Southern Pacific has threatened trespassers with prosecution — for good reason of course — one careless campfire could destroy the entire line.

Now, all has changed and the park plan reportedly has a good chance. The railroad bought the gorge line outright, rather than negotiating with the federal government for a right-of-way only. Several good jeep-style roads connect the gorge with the Jacumba area and these, too, may now be opened to legal travel. □

See Publisher's Poke, Page 4,
for Precautionary Note.

Letters to the Editor

Letters requesting answers must include stamped self-addressed envelope

Cibola Treasure . . .

While researching a Death Valley story through one of my better sources, namely old files of *Desert*, I ran across a letter signed "A Subscriber" who claimed to have found the "Cibola Treasure." (*Desert*, October 1966.)

Among the many items reported found was what "appeared to be a treasure map" and the finder promised to send it to *Desert* if he failed to "figure it out." I find no record of this latter transaction.

The original "Cibola Treasure" was a collection of personal effects of one Willy Rood (or Roods or Rhoades) who, in the absence of any better place of safety on a wild and untamed frontier, buried for safekeeping what little of importance he had gathered in his short lifetime. Killed by accident or design on the nearby Colorado River, his treasure was long sought but never previously reported found.

Willy Rood was one of the Jayhawkers who "discovered" Death Valley in 1849. If his buried map did survive a century of safekeeping in the desert, it just might reveal the Jayhawker route through Death Valley, a route not known with any great assurance to this very day.

Though a century too late to help locate the Lost Gunsight Lode or the gold coin buried by the Jayhawkers at Summit Camp, the map could still be of great historical importance.

Collectors of Death Valley lore would like to be assured of the protected existence of such a map. Further, I would like to include it in one of my stories if it could be located at this late date. A copy, even with the black X deleted, would be much appreciated at 1310 N. Orchard Dr., Burbank, Calif. 91506.

JOHN SOUTHWORTH.

Ghost Town Litter . . .

We recently made a trip to Death Valley, traveling all the older side roads we could, and drove through Trona. I wish the road to the Pinnacles was marked better.

At any rate, we were very sad to see that Ballarat is being covered by junk. The few remaining old rock buildings are not protected and the area is littered with old junk cars and engines. It is an eyesore, and so close to Death Valley.

It is a shame our few remaining ghost towns cannot be protected.

SHARON SNYDER,
Ventura, California.

Calendar of Events

This column is a public service and there is no charge for listing your event or meeting—so take advantage of the space by sending in your announcement. We must receive the information at least three months prior to the event.

MAY, 27-29, Yucca Valley, California's 27th Annual Grubstake Days. Parade, art exhibit, contests, games, many events planned.

MAY 28-30, 13th Annual Gold Country Classic for four-wheel-drive and dune buggies, sponsored by the Sacramento Jeepers, Inc., 9 miles east of Sloughhouse, Calif., on Highway 16, 20 minutes from Sacramento. Competition geared for the family off-roader. Camping space available.

JUNE 2, "Nevada Rainbows," sponsored by the Executive Board, Reno-Sparks Garden Clubs, St. Lukes Lutheran Church, 3835 Lakeside Dr., Reno, Nevada. Exhibit types: Horticulture, Artistic Arrangements, Table-setting and Junior Division. Admission free.

JUNE 4 & 5, Riverside Gem & Mineral Society's 9th Annual Western Gemboree, Alessandro Jr. High School, Dracea at Indian, Sunnymead, Calif. Admission and parking free. Chairman: Robert Everett, 2147 Flintridge Ct., Riverside, Calif. 92506.

JUNE 4 & 5, 11th Annual Rockhound Round-up sponsored by the Rockatomics Gem and Mineral Society, 8500 Fallbrook Ave., Canoga Park, Calif. Exhibits, dealers, demonstrations. Free admission and parking. Chairman: Frank Aiken, 1791 Kearney Ave., Simi, Calif. 93065.

JUNE 11 & 12, Lassen Rocks and Minerals Society 5th Annual Show to be held at Jensen Hall, Lassen County Fairgrounds, Susanville, Calif. Exhibitors, dealers (space filled), food, tailgating, space for trailers and campers (no hookup). Free admission to exhibit.

JUNE 25 & 26, Antique Barbed Wire & Collectable Show, sponsored by the California BarbedWire Collectors Assn., Art Building, Fresno County Fairgrounds, Fresno, Calif. Free admission. Write to William Pereira, P. O. Box 678, Riverdale, Calif. 93656.

JUNE 17-19, California Federation of Mineralogical Societies 38th Annual Show and Convention, Centennial Coliseum, Reno, Nevada. Host: Reno Gem and Mineral Society, P. O. Box 2004, Reno, Nevada 89505.

JUNE 18 & 19, 12th Annual Antique Bottles and Collectables Show, sponsored by the San Diego Antique Bottle Club, Scottish Rite Memorial Center, Interstate 8—Mission Valley, San Diego, Calif. Admission \$1.00.

For information: Shirley Toynton, 9220 Maranda Dr., Santa Fe, Calif. 92071.

JULY 1-3, Cactus and Succulent Show sponsored by the Cactus & Succulent Society of America, Los Angeles State and County Arboretum, 301 North Baldwin Ave., Arcadia, California. Admission free. Contact: Kathryn Sabo, 20287 Rustin Rd., Woodland Hills, Calif. 91364.

JULY 23 & 24, Annual Begonia and Shade Plant Show of the Theodosia Burr Shepherd Branch of the American Begonia Society, Cafeteria Building, 4667 Telegraph Rd., Ventura, Calif. Educational exhibits and rare begonia and shade plants for sale. No admission, free parking.

AUGUST 27 & 28, Simi Valley Gem and Mineral Society's Annual Show, Larwin Community Center, 1692 Sycamore, Simi Valley, Calif. Delaers. Chairman: Irene Josephson, 1247 Carmel Dr., Simi Valley, Calif. 93065.

SEPTEMBER 24 & 25, "Harvest of Gems" show sponsored by the Centinela Valley Gem and Mineral Club, Hawthorne Memorial Center, El Segundo Blvd., and Prairie Ave., Hawthorne, Calif. Dealers, displays, demonstrations. Ample free parking. Chairman: Don C. Johnson, (213) 377-1674.

SEPTEMBER 24 & 25, Carmel Valley Gem and Mineral Society's 18th Annual Show, "Jubilee of Jewels." Monterey County Fairgrounds, Monterey, Calif. Dealers, demonstrations. Parking free.

OCTOBER 1 & 2, "Nature's Jewel Box," sponsored by the Napa Valley Rock and Gem Club, Inc., Napa Town and Country Fairgrounds, Main Exhibit Building, 575 Third St., Napa, Calif. Dealers, demonstrations. Donation 50 cents. Easy parking and camping facilities on the grounds. Chairman: Gerald Bradford, 2068 Sommer St., Napa, Calif. 94558.

OCTOBER 15 & 16, Lake Havasu City Gem and Mineral Society's 8th Annual Show, Lake Havasu Junior High School, 98 Swanson Ave., Lake Havasu City, Ariz. Dealers, guest displays, educational programs, field trips. Chairman: W. C. Reichel, P.O. Box 1366, Lake Havasu City, Arizona 86403.

OCTOBER 21-23, 5th Annual "Tucson Lapidary and Gem Show," sponsored by the Old Pueblo Lapidary Club, Tucson Community Center Exhibition Hall, 350 S. Church St., Tucson, Arizona. Dealer space sold. Chairman: Gene Davidson, P.O. Box 2163, Tucson, Arizona 85702.

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